

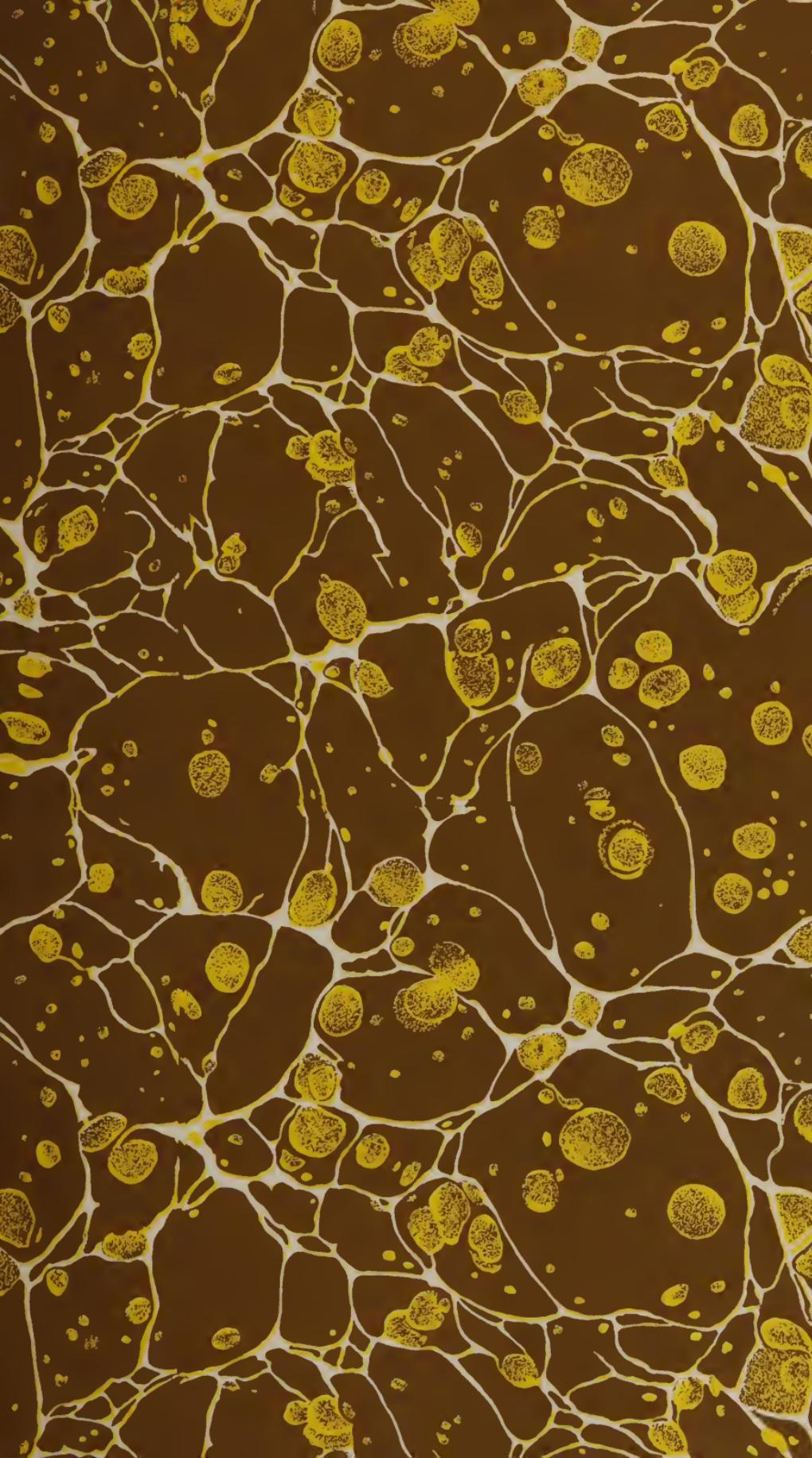
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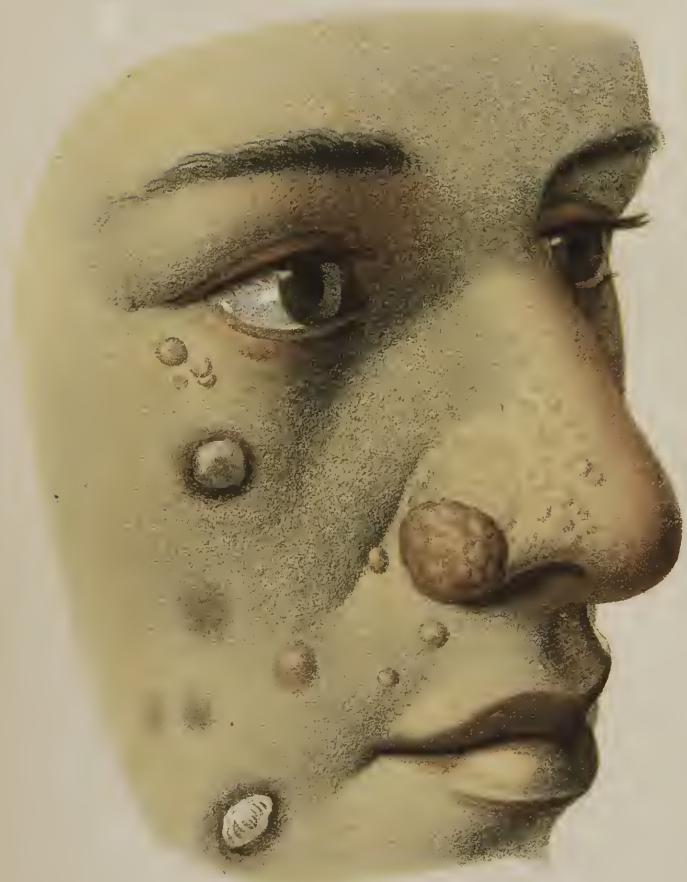


ANNEX
Section _____
Rec. No. _____

Number _____ 72449

Form 113c, W. D., S. G. O.
(Revised June 13, 1936)





A COMPLETE
PRACTICAL TREATISE
Batchelder
ON
VENEREAL DISEASES,

AND THEIR
IMMEDIATE AND REMOTE CONSEQUENCES.

INCLUDING OBSERVATIONS ON

CERTAIN AFFECTIONS OF THE UTERUS,

ATTENDED WITH DISCHARGES.

BY WILLIAM ACTON,
LATE EXTERNE AT THE FEMALE VENEREAL HOSPITAL, PARIS.

FIRST AMERICAN EDITION,
WITH ADDITIONAL ILLUSTRATIONS AND COLORED PLATES.

NEW YORK:
J. S. REDFIELD, CLINTON HALL,
CORNER OF NASSAU AND BEEKMAN STREETS.

1846.

~~W. T.~~

W. T.
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1844

TO

P H I L I P R I C O R D , D . M . P .

SURGEON TO THE VENEREAL HOSPITAL, PARIS; LAUREATE OF THE INSTITUTE OF
FRANCE, &c., &c., &c.

MY DEAR SIR :

Europe may admire the genius of the author of the "Traité Pratique sur l'Inoculation," the British critic may call you the French Hunter, and the Institute may crown you with its laurels ; but the pupil who, for a series of years, has watched you at the bedside, performing the varied experiments which are overturning long-received opinions, and collecting those facts which form the basis of a new school, can alone adequately feel, and sufficiently appreciate, that honest and manly candor which is always ready to acknowledge errors, and that generosity which allows others to participate in opinions still unpublished.

To have acquired and still to retain the friendship of such a man, will always be a source of pride and satisfaction—feelings which have been not a little increased by your kindly permitting me to inscribe this volume to you, and thus affording me an opportunity of stating to my countrymen the friendly relations which subsist between us.

Believe me, my dear Sir,

To be your grateful friend,

WILLIAM ACTON.

5, GEORGE STREET, Hanover Square,
March, 1841.

P R E F A C E.

AMONG the valuable works and monographs which the English language possesses on the subject of this treatise, a surgical lecturer would be embarrassed in selecting or recommending any one book as affording a complete view of Venereal Diseases. Volumes on Stricture, Syphilis, Gonorrhœa, &c., fill his shelves, and each work has its peculiar recommendations ; but, with the exception of Astruc and Hunter, he will in vain inquire for the authors who have treated on Venereal Diseases at length.

The pupil who wishes to investigate this subject, is obliged to consult a variety of works, and he soon finds himself embarrassed by the most glaring contradictions between contemporary or preceding writers, and the limited number of cases that come under his observation does not allow him to separate what is truly valuable from among the chaotic mass of authorities.

The author has attempted to fill up this blank in medical literature ; he has consulted the principal authors that have written on the subject ; he has retained what is practical, and from the extensive opportunities of observing the natural history of the disease, and the various plans of treatment in British and Continental hospitals, he hopes to have succeeded in reconciling some of the apparent inconsistencies of previous writers ; and in presenting a body of doctrines compatible with the present advanced state of Pathology.

Once for all, he pleads guilty to the charge of introducing some few terms new to English readers, and leaves them, in the words of Johnson, “ Candidates or probationers, which must depend for their adoption on the suffrage of futurity.” Let the critic suspend his

judgment upon them until he be in possession of the reasons which induced the author to attempt to alter the nomenclature of his subject. Although fully aware of the truth of the observation of Hooker, that "change is not made without inconvenience, even from worse to better," still he has not dared to preserve terms sanctioned by their antiquity, "such as *hernia humoralis* and *condylomata*," at the expense of rendering himself unintelligible.

The reader will find a very copious Analytical Table of Contents, which, it is hoped, will at once explain the system followed, and enable him to refer to any subject he may wish to investigate.

The author can not but refer with pleasure to the illustrations; and hopes that being the first of the kind that have ever been published in England, they will meet with the approbation of the profession. The original drawings, he feels confident, bear the stamp of their own value as true copies of nature, and he has only to add that they were chosen from among the thousands of cases witnessed at M. Ricord's Clinique, and submitted to his approbation. He has spared no expense in securing the assistance of first-rate artists, as the execution of the plates proves.

He would ill requite the favor that has been shown him, did he not publicly acknowledge how much he is indebted to the scientific liberality of the administration of the French hospitals, as well as to the surgeons of the female venereal institutions, in placing the patients at his disposal; thus affording him unexampled opportunities of studying female complaints. How far he has profited by such opportunities the Plates themselves will testify;—how deeply he is indebted to the officers of those institutions, no words can express.

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INTRODUCTION.

HISTORY OF VENEREAL DISEASES.

A very superficial consideration of the laws which regulate the animal economy in a state of health and disease, together with the various operations of these laws on the different structures of the human frame, is sufficient, I think, to entitle the pathologist of the present day to infer that various affections, both organic and functional, now recognised as following sexual intercourse, must have existed in all ages and in all climates; these I have included under the collective term of "Venereal Diseases."^{*}

Believing, however, that it is not sufficient for the purposes of this work to render such an inference merely probable, I shall in the following pages attempt to prove, from authentic historical records, that various diseases answering to this definition were known, and have been described, by persons living in the early ages. These I shall trace down to the present time; but in doing so I shall be as concise as possible, and only dwell upon such points as may be of practical use.

An attentive perusal of the twelfth and fifteenth chapters of Leviticus must convince any impartial person that the Jewish lawgiver, in strictly enjoining ablution and separation to women after delivery and menstruation, or, as is said at the eighteenth verse, particularly to "the woman with whom man shall lie with *seed of copulation*," must have had in view the prevention or cure of affections liable to follow sexual intercourse at that time. This regulation was promulgated about the year 2400 A. M.

On referring to the fifth chapter of Proverbs, the reader will find Wisdom admonishing her pupil, and desiring him to avoid strange women, lest his flesh and body be consumed. And in Ecclesiastes it is stated, that "whosoever joineth himself to adulterers shall become impudent, and that rottenness and worms shall have him to heritage." Thus we find allusion made to it again about the year 2950 A. M.

On the authority of Peter Paul Vergerius the elder, it is stated that "Ubertinus of Carrara, the seventh of that name, and the third governor of that city, died at Padua, the 29th of March, in the year 1245, of a lingering disease of his private parts, occasioned by too much venery."[†]

* By the term venereal diseases, I mean all those affections which are, more or less, directly or indirectly, the consequence of sexual intercourse, in whatever way effected.

† Astruc, p. 58.

Gulielmus de Saliceto, a physician of Placenza, in 1270, states in his work “*De Apostemate in Inguinibus*,”* “This disease, called a bubo, dragoncelli, or impostume of the groin, for the most part arises from a cold humor which is expelled from the liver to those places which are weak and empty; it sometimes also proceeds from a hot humor, and sometimes it comes from a foulness in the yard (*in virgâ corruptio*), contracted by lying with an unclean woman, or from some other cause.

In Astruc’s treatise,† it is stated that an eyewitness, Theodoric, a celebrated physician in the year 1290, in his *Chirurg.*, lib. vi., cap. 55, says, that “whoever converses with a woman who *has lain with* a leper will catch the distemper.”

Bartholemew Glanville, in his book *De Proprietatibus Rerum*, translated in 1398 by John Trevesa, speaks of “Unclene spostyd glemy and guyttery, the nosethrilles ben stopyl, the wasen of the voys is rough, and the voyce is hoorse, and the heere falls.” This disease of leprosy “comyth of fleshly lying by a woman after that a leprous man hathe laye by her; also it comyth of fader or moder; and so thys contagyon passyth into the chyle, &c. And also when a chylde is fedde wyt corrutpe mylke of a leprouse nourryce.” In Henry the Eighth’s time there were six leprous or lazars houses.

Lanfranc of Milan, a pupil of Gulielmus de Saliceto, who consequently lived about the year 1290,‡ states, that chancres and ulcers of the penis follow from coition with a foul woman. Bernard Gordon, professor of physic in the University of Montpelier in 1300,|| says that “diseases of the yard are numerous, following lying with a woman whose womb is unclean, full of putrid sanies, virulence,” &c.

In a manuscript, in Lincoln College, Oxford, cited by Beckett, and corroborated by Dr. Wagstaff, in the thirtieth volume of *Phil. Transact.*, it is stated on the authority of Thomas Gascoigne, chancellor of that university, that “*Joan. de Gaunt mortuus est ex tali putrefactione membrorum genitalium, et corporis sui causatâ per frequentionem mulierum.*” This took place in the year 1399.

About the year 1423, Petrus de Argelata, of Bologna,§ says, that the retention of the poisonous matter lodged between the glans and prepuce, after a man has had to do with a foul woman, causes the part to become black, and the substance of the yard mortifies, &c. He likewise speaks of the occurrence of bubo in the groin as a consequence of this affection.

In the thirtieth volume of the *Philosophical Transactions*, page 843, Beckett cites the following passage from a book in the custody of the bishop of Winchester, supposed to be written in the year 1430, and entitled “*De his qui custodiunt mulieres habentes nephandam infirmitatem?*” “That no stew-holder keep noo woman wythin his house that hath any sycknesse of brenning;¶ but that she be putte out, upon the peyne of makeit a fyne unto the Lord of a hundred shylings.”

* Lib. i., cap. 42.

† L. c., p. 53.

‡ Tract. 3, Doct. ii., cap. 11. Practicæ seu artis completæ, &c. And also in Tract. 3 Doct. iii., cap. 11. De fico et cancro et ulcere in Virgâ virili.

|| Lili Medicinæ Particul, vii., cap. 5. De passionibus virge.

§ Chirurgiæ, lib. ii., tract. 30, cap. 3. “*De pustulis quæ adveniunt virgæ propter conversationem cum fæd' muliere, quæ albae sunt vel rubrae.*”

¶ On the authority of a manuscript of John Arden, surgeon to Richard II., the word brenning is thus defined: “A certain heat and excoriation of the urethra.”

Beckett quotes the following questions as being put to persons who were said to be lepers; he cites them from an ancient book of surgery: "If there were any of his lygnage that he knew to be lazareſ, and especially their faders and moders, for by any other of their kynred they aught not to be lazares, then aught ye to enquire if he hath had the company of any leprous woman, and if any lazar hath meddled with her afore him; and lately, because of the infect matter and contagious filth that she had received of hym. Also his nostrills be wide outward, narrow within, and gnawn. Also if his lips and gumins are foul, stynking, and coroded. Also if his voice be hoarse, and as he speaketh in the nose."

John of Gadesden* not only alludes to the possibility of contracting the complaint from a leprous woman, but mentions the precautions which should be adopted to avoid contagion. "Ille qui concubuit cum muliere cum qua coivit leprosus puncturas intra carnem et corium sentit, et aliquando calefactiones in toto corpore.

"Primo notandum est ille qui timet et excoriationem et arsura virgæ post coitum statim lavet virgam cum aquâ mixta aceto, vel cum urina propria, et nihil mali habebit."†

"Si quis vult membrum ab omni corruptione servare, cum recedit a muliere quam suspectam de immundicie, lavet illud cum aqua frigida cum aceto mixta, vel cum urina propria interius vel exterius intra preputium."‡

The affections to which we have alluded, and which were described as existing previously to the 15th century, had received no particular name; but after the severe epidemic observed at Naples, and which was so well described by Fracastorius, they became known under the title *Morbus Neapolitanus*, or *Gallicus*, *Mal des François*, and soon after the terms *Gore*, *Grande Gore*, *Verolle*, *Grande Verolle*, were successively given to them in consequence of the general pustular eruption by which they were attended.

Lastly, the affections were described under the title *Scorra Pestentialis*, by Sebastian Brant, in 1496, and by Grunpeck, a German physician. Gaspar Torella writes on the subject a treatise, *Contra Pudendagra*, in 1498.

It was generally known by one or other of these denominations until Jaques de Bethencourt of Rouen called it the *Venereal Disease*, in a book entitled *Nova Pænitentialis Quadragesima, nec non Purgatorium in Morbum Gallicum, sive Venereum*. Paris, 1527.

In the year 1530 Fracastorius|| writes thus: "When it first broke out among us, it discovered itself by the following symptoms: the patient was low-spirited, complained of weariness, and had a pale look; at last, for the most part, little ulcers appeared about the pudenda, which were extremely obstinate, and, after they were cured in one part, broke out afresh in another. Afterward a kind of crusty pustules appeared upon the skin, beginning in some upon the scalp (which was most frequently the case), and upon other parts in others. At first they were only small, but increased, by degrees, in a short time, to the size of the husk of an acorn, and had a good deal the same appearance, not unlike those scabs which appear on the heads of boys. Of these scabs there were

* Doct. 61.

† Rosa Anglicæ. Pavia, 1492. Car. 61. In the library of the College of Surgeons.

‡ Car., 107. || De Morbis Contagiosis. Lib. ii., cap. 2. De Morbo Gallico.

several different kinds, some of them small and dry, others large and moist; some of a livid color, some of a palish white, and some hard and reddish. All of them opened in a few days, and discharged a thick fœtid matter; nor is it possible to express what the quantity of that matter perpetually discharged was, nor how nasty it was in quality. Afterward the ulcerated parts became eroded in the same manner as those ulcers which are called phagædemic, and sometimes they infected not only the flesh, but likewise the very bones. When it attacked the head chiefly, it produced acrid rheums, which eroded sometimes the palate, sometimes the uvula, sometimes the jaws and tonsils. In some it destroyed the lips, in others the nose, in others the eyes, and in others the whole pudenda. Besides this the limbs in a great many were disfigured with gummy tumors, which frequently grew to the size of an egg, or a small loaf, and, being laid open, discharged a white mucilaginous matter. That tough hardness appeared chiefly in the legs and arms, and, sometimes became ulcerated; sometimes it continued entire till death. But, besides all the above-mentioned symptoms, as if they were only trifling, there occurred violent pains of the arms, frequently, together with pustules, sometimes before, sometimes after, very obstinate and lasting, and excessively tormenting. They were most violent in the night, and the pain was not properly in the joints; but in the muscles and nerves. However, there were pustules sometimes without pains; and in some, pains without pustules; but the greater part was afflicted with both. In the meantime, all the limbs became feeble, the body emaciated, the appetite quite lost; the patient had no sleep, but was either melancholy or very irritable, with a strong inclination to lying in bed. His face and legs swelled; sometimes, though rarely, the disease was attended with a slight fever; some had a pain in the head, which was lasting, and not to be subdued by any medicines.”*

During the following years, John de Vigo, Peter Maynard, Nicholas Massa, Fallopius, and others, make mention of the remaining symptoms, which are now universally recognised.

Fernel, in 1548, thus writes: “On whatever part of the body the *Lues* first settles, there fixing itself, it excites a pustule, and soon after a small ulcer. Thence extending further, it fixes its roots, and sensibly penetrates the interior by a forced unceasing action; and in fine, unless you shall have opposed to it some remedial measures, it devastates and commits ravages on the whole by its virulence. From this it is manifest that a certain poison constitutes the essence of the disease, creeping over or insinuating itself into the whole body, in no manner differing from the poison of the rabid dog or scorpion. The signs of it are various, depending on the nature of the parts over which it spreads. When the virus, for the sake of illustration, has its origin in copulation, from the private parts bedewed with moisture, it determines, first, pustules in those parts which are very obstinate, and then small ulcers which are difficult to treat, and are of rather a bad character. Then the vapor or effusion, creeping inward by

* This description of Fracastorius may apply even at the present day. Let any one who is cognizant with large venereal hospitals be asked if he does not often meet with cases of this kind. Females of abandoned lives apply for admission, giving the description here spoken of, viz., laboring under severe secondary symptoms, and do not mention, or altogether deny, the previous existence of primary symptoms. Fracastorius was unaware of the relation between secondary and primary symptoms. There are Fracastorii at the present day, in spite of the progress of surgery.

the hollow canal of the pudendum (for it is not credible that any humor or fluid enters it), it impoverishes (labefactat) the blood of the vena cava and the spirit contained in the larger artery, and then the bubo breaks out in the groin. Hence a gonorrhœa manifests itself from the diseased spermatic ducts and kidneys, by which this most foul virus is ejected as by belching. When this execrable disorder has invaded the liver and stomach, a certain slight abdominal flux breaks out, and soon after the blood is infected with the liver, by which all the veins of the body become implicated; and in this manner disseminated in the limbs, muscles, and skin, it having been repulsed, breaks out silently, and worse than before. Livid and reddish pustules occur, ulcers covered with crusts and teters, in some persons excavated and malignant ulcers, and in bilious persons phagædemic and corroding sores; in the melancholic temperament, cancerous or cancerous ulcers; and in the phlegmatic they are more superficial (*leviori*), but more foul, and discharging a fetid, mucous humor; and in sanguineous persons they are more thickly set, and resemble carbuncles. All, indeed, with very hard, indurated, tumid, and inverted edges, which (ulcers) having eaten the flesh, feed upon the bones themselves; at first the thin bones (as, for instance, those of the palate and nose), then those of a more solid consistence, which, becoming putrid and carious, are thrown off. It follows, as a natural consequence, that when the head is attacked, or the brain is the seat of the disease, many pituitous humors, disproportionate to the condition of the part, collect, which, if shut up in the head, produce a severe and considerable pain; but if they point under the scalp, and should be determined toward the joints and limbs, they excite most dreadful and daily tortures, increased greatly at night; or they excite very hard *tophi* and scirrhouus tumors, by no means free from pain. Although the matter appears pituitous, nevertheless, being impregnated with this deadly matter of poison, it partakes of its acrid properties. Thus hiding itself under the periosteum of the bones, it produces pain both by its acrimony and by distension. Penetrating the substance of the bones as it were by minute tubes, it expands them and dilates them into tumors—which (bones) at length being attacked with caries, become putrid. If the matter being less biting and acrid does not destroy the skin, its malignity or noxious vapor, being poured out around the hair, occasions (in the language of Fernel) an effluvium; on which account the greater part appear without hair on the head, eyebrows, or body; but the hair may be reproduced.

"But its effects are not confined to the external parts alone; they extend to the internal parts, affecting even the viscera, which are found, as in exanthematic diseases, on dissection, covered with pustules and ulcers."*

* Joan. Fernelius de Abditis Rerum Causis. Lugduni. Liber ii., cap. xiv. De Morbis Contagiosis, p. 210.

Who can deny this accurate description of the ravages of syphilis? No author of the present day can add to the category of the affections successively attacking the various parts of the body, but their relation to primary symptoms was unknown; this, however, was not surprising; at the present day I not unfrequently meet with such cases at St. Bartholomew's Hospital, among the female patients, the genital organs covered with primary sores, the body concealed, as it were, by scabs, the throat and bones suffering simultaneously. Such cases, of course, are contagious, and were arranged under the head of contagious diseases, but no distinctions were made in those days. Fernel, like many modern surgeons, viewed the ulcers as one and the same, and considered them contagious—an error, as will afterward appear.

In the year 1736, Astruc, physician to Louis the Fifteenth, wrote his celebrated treatise on the Venereal Disease; to him is due the merit of having written the most learned book of the day, and of having treated the subject in a methodical manner.

The work of Astruc is divided into two parts; in the first he describes the first stage, or local venereal diseases; in the second he treats of the second stage, or confirmed pox; in other words, of the venereal disease when it has become universal.

Under the first stage he included, 1. Virulent gonorrhœa and all its consequences. 2. Venereal buboes. 3. Chancres. 4. Verrucæ and condylomata

Under the second stage, or confirmed pox, he describes successively, 1. Diseases of the genitals. 2. Diseases of the skin. 3. Diseases of the mouth and nose. 4. Venereal pains. 5. Diseases of the bones. 6. Glandular and lymphatic tumors. 7. Diseases of the eyes. 8. Diseases of the ears. 9. Disorders of the functions.

Hunter, in 1784, like Astruc, admitted the existence of a venereal virus, and traced an admirable picture of the disease; he, moreover, taught that this virus on which the venereal disease depended, might affect the system in two modes. Primarily or locally, secondarily or constitutionally. By his experiments on inoculation, he proved that these divisions existed, and might easily be distinguished.

The same learned author believed that the primary effect of the venereal virus was twofold. When it came in contact with a mucous surface, a gonorrhœa resulted; when, on the contrary, it was placed in apposition with the skin, chancres would follow. Hence his classification of gonorrhœa and syphilis as the primary effects of one and the same virus.

He called public attention to the induration which he believed always attended true primary sores,* and did not consider as syphilitic such primary ulcerations as presented no such appearance.

John Hunter further professed that the venereal virus in either of its two primary forms could give rise to constitutional effects, which he has so ably described in his valuable work, under the term *Lues Venerea*.

In 1782, Benjamin Bell brought forward his experiments and reasons for separating gonorrhœa from syphilis or chancre, and his views were afterward adopted and corroborated, in 1812, by Hernandez of Toulon.

In 1815, the celebrated Broussais taught that syphilis is an irritation which affects the exterior of the body as does scrofula; that the physiological school of medicine ought only to note the forms and degree of irritation in the different organs, and that it should alone occupy itself with means to oppose it. Messrs. Jourdan and Richond, the pupils of Broussais, followed up the doctrine of their teacher, and denied the existence of a virus; "Call it what you will," say they, "but name it not virus." They consequently reject the idea of the constitutional phenomena of poisoning, which they regarded merely sympathetic of local irritation.

In 1830, M. Ricord commenced his investigations on the causes and natural history of venereal diseases. The first result he obtained was to convince him-

* De Vigo had long before done this, but Hunter laid stress upon a point which seems to have been generally overlooked.

self and the public that a special cause (perfectly independent of the sexual organs) gave rise to and occasioned the propagation of syphilis; he moreover attached a strict meaning to each term he employs, instead of that chaos of synonymous terms which existed in the writings of preceding authors.

Considering the term "venereal diseases" in its most extended sense, he defines it to be, "all those affections which are more or less, directly or indirectly, the consequence of sexual intercourse, in whatever way affected."

Venereal diseases thus defined, he arranges in two orders.

ORDER I. contains diseases depending upon common causes, independent of any special agent, reproducing themselves daily, and under all possible conditions; consisting of simple affections, in a word, non-virulent. We call them syphiloid diseases.

ORDER II. contains diseases depending upon a special principle, distinct from all the ordinary morbid causes; affections which give rise to special effects called virulent. We call them *syphilis*.

This second order has three distinct stages.

1st STAGE includes *primary* symptoms, which are the immediate effect of the morbid cause occurring on the spot where the *virulent* agent has been deposited. Example, chancre.

2d STAGE comprehends *secondary* symptoms, which are the consequence of absorption into the system of this virulent cause. They are hereditary, but not capable of transmission by inoculation. Example, certain affections of the skin and mucous membranes, iritis, &c.

3d STAGE comprises *tertiary* symptoms, not capable of being transmitted by inoculation, nor hereditary, but subject to pathological transformations and alterations of the submucous and subcutaneous, or of the fibrous or osseous, tissues.

II.

HISTORY OF THE THEORIES ENTERTAINED ON THE NATURE AND ORIGIN OF VENEREAL DISEASES.

It may be thought by some superfluous to dwell upon these subjects, inasmuch as they have been already treated of in the previous part of this historical sketch. The perusal of this section will, however, I trust, prove that such is not the case, as the notice taken of them was only incidental, and they still require further elucidation.

In the sacred writings, from the slight allusions made to these affections, no one will be surprised to find that these points are barely dwelt upon; but there is apparently no reason to believe that they were supposed to differ from other diseases, except in consequence of the manner in which they were contracted; in fact, they seem to have consisted of simple inflammatory affections, which yielded to ordinary means.

Whether the affections described in the Proverbs were mere inflammatory diseases, or maladies of a *specific* nature, is a question which I shall not now stop to examine.

The various affections of the genital organs, of which mention is made by Hippocrates, Celsus, and other ancient writers, as they are not stated to have

followed sexual intercourse, can not be noticed here; neither will it be necessary to state the various theories which these fathers of physic entertained on their cause—such as too great continence, a dyscrasy of the humors, &c.

In the year 437, as mentioned in a former part of this introduction, a disease of the genitals which followed connexion was supposed to depend upon the judgment of Heaven. In the 13th century, as we learn from the writings of Gulielmus de Saliceto and John of Gaddesden, the disease, although attributed to contagion from foul women, was supposed to originate in hot humors, which find their way out of the body through the womb. A little later the disease was stated to have arisen in consequence of persons being affected with the leprosy; and we may offer it as a probable conjecture, that under this term were included affections which would now be called venereal.

Such were the opinions entertained regarding the disease we have sketched in the previous pages, up to the end of the fifteenth century; in fact, many authors of great repute believe that, up to this period, no such afflictions as may be called venereal had existed. Whether these opinions be correct I shall leave to the consideration of my readers, as they are now in possession of the data on which to decide, and I shall at once pass on to the opinions entertained at that period on the nature and origin of venereal affections.

Those authors who wrote at the latter end of the fifteenth and commencement of the sixteenth century, were convinced that venereal affections, which at that time assumed such severe forms, owed their origin to the fatal influence of the stars, to the conjunction of Venus and Mars, or of Jupiter and Venus. Among this class may be enumcerated the names of Torella, Maynard (Peter), Fracastorius, &c.; and hence we may infer the influence that astrology and the planets were supposed to exercise in producing disease, even by the best-educated physicians of the day. There were, however, others who treated as idle fancies these supposed stories of astrologers, and the malign influence which the air was supposed to produce; thus, the venereal disease being generally acknowledged to be a contagious malady, the same causes were stated to develop it as are now considered to give rise to epidemics. These opinions, however, gradually lost ground, and a more special cause was sought after, as the nature of the means and ordinary sources of contagion became more generally known; among others, they (venereal diseases) are again attributed to leprosy, to ulcers in the womb, to poisoned wells, to the use of lime in bread, &c.

Van Helmont, in 1640, believed that the disease first sprang from *unnatural connexion* between a man and a horse laboring under the farcy, which occurred, as he believed, about the time of the siege of Naples. Dr. Linden thought that it had its origin “in sodomy sometimes committed between men and monkeys, or the satyrs of the ancients.”

Having given the principal hypotheses, I shall pass to the opinions of more modern authors, not, however, omitting to state that the major part of the authors believed that the diseases which they described were *new*, and not known previously to the taking of Naples.

That learned and laborious author, Astruc, was of opinion that venereal diseases were not known in Europe previously to the year 1493, when, he states, they were brought into Spain by the followers of Columbus, on their return after the discovery of America. The same author quotes various passages from contemporary writers to prove the correctness of his opinion, and states that

venereal diseases were endemic in the Antilles, and especially in the island of St. Domingo, whence they were directly imported. In subsequent pages he cites various passage for the purpose of proving that they are of native growth, and that the following places may be considered as so many seed-plots of the venereal venom : viz., *the kingdom of Peru; New Spain; Florida; the midland part of Africa under the line; the island of Java; the Molucca islands; the country of China.*

As to the immediate source of the diseases in these countries, Astruc attributed them to the nature of the diet, to immoderate promiscuous intercourse, and the virulent acrimony of the menstrual flux.

Having explained in this manner the original appearance of the venereal disease, Astruc informs us that it was communicated by sexual intercourse to the Spaniards, who imported it into Europe; thence it spread among the Neapolitans. Soon afterward he traces it among the French, who contracted it from lying with infected women at the siege of Naples, and it soon afterward spread over the other countries of Europe.

In 1752, Sanchez* wrote a book to contradict the opinion which the writings of Astruc had made popular, and came to the following conclusions :—

1st. That the venereal disease was known in France previous the arrival of Columbus.

2d. That the Spanish army could not have given the disease to the French troops, as it did not come in contact with them.

3d. That it commenced in Italy, at the beginning of the year 1493, as an epidemic.

Hunter declines giving an opinion on the origin of venereal diseases, as he thinks it could be of little practical benefit. Having previously noticed at length his division of the diseases, and the opinion he entertained on the specific nature of the virus, which caused both gonorrhœa and syphilis, I shall not here allude to them.

Broussais and his followers, as I stated before, denied that the venereal disease depended upon a *virus*. M. Richond, in 1826, published a work, entitled “*De la Non-Existence du Virus Vénérien.*” Practitioners of this school believe that venereal diseases depnd upon simple inflammatory affections, resulting from the mode of the peculiar vitality of the organs primarily affected, and of their sympathetic power over certain parts of the economy.

They believe that the diseases in question may arise spontaneously, and instances are given by them in which this is said to have occurred.

Having now traced the principal opinions (from the earliest times to the present day) which have been entertained on the origin and nature of venereal diseases, I shall, in as concise a manner as possible, give my own opinions, which I have every reason to believe are those of M. Ricord; but as the professor of the *Hôpital du Midi* has not yet published on this subject, I am unable to quote his words.

Venereal diseases, according to the definition which I have already given of the term, have probably existed from the most remote ages, or at least the *non-virulent* class of such affections. Proof of this has not only been adduced from history, but I have likewise the following reasons for the belief: At the pres-

* Sur l'Origine de la Maladie Vénérienne. Paris, MDCCCLII.

ent day we find that all *these non-virulent affections** may be developed spontaneously, and that we can produce them at will; hence I conclude that it is more than probable that they existed long before they were described, because the same agents were then in action to produce these affections as at present. Thus I admit the spontaneous origin of all non-virulent diseases, and that when once developed they may be propagated by contact, under circumstances which I shall hereafter allude to.

In respect to the *second order of venereal diseases, or virulent affections,*† I can only now assert (and must refer to the subsequent chapters for proof), that we are not acquainted with any cases (nor do any such exist on record) which prove that syphilis, properly so called, can arise spontaneously; all the experiments made to produce it *de novo* have completely failed; and a careful investigation of the disease proves, on the contrary, that it has been contracted from a person who has himself contracted it of another, and it is in this way that the disease is now propagated. I thus deny most positively the *spontaneous origin* of this form, or of *syphilis*, properly so called; the exact laws and periods at which it ceases to be contagious, as far as my observations extend, will be mentioned hereafter.

When this disease began (for necessarily it must have had an origin) I, in common with many previous writers, admit my ignorance. I can trace it (as I have done) as far back as the year 1494, and on this point there is little difference of opinion; previously to that year authors are not agreed: for my own part, I believe that a disease similar to syphilis was known previously to the year 1494, as may be gleaned from the authors I have cited; but I am as firmly induced to believe that the exact date of its outbreak is unknown, and that we are in ignorance of those circumstances which first gave it birth, or in what country it first made its appearance; in this respect the same lack of information reigns as in a vast number of other diseases, the origin of which we are equally unable at the present day to ascertain. I believe that the disease has had various phases; at one period it has assumed a very mild character, in consequence of attention to cleanliness and peace. On the other hand, in time of war and famine, it has assumed aggravated forms depending upon evanescent causes; and the disease, though always smouldering, will break out again, and rival in intensity those forms described by Fernel and Fracastorius, should the world become the scene of that condition of society which existed in the sixteenth century. In proof of this, I need only cite Dr. Ferguson's account of the disease as it attacked our men in the Peninsula, and gained it the name of the Black Lion of Portugal.

Having given, then, my own opinions, which will be more fully developed in the succeeding pages, I turn from this theoretical part to describe practically a disease on which the author and reader will more certainly agree.

* By the term non-virulent affections I mean diseases, the consequences of sexual intercourse, depending upon common causes, and not on any special one; as, for example, gonorrhœa, &c.

† By this term are meant those affections which depend on a special principle, distinct from all the ordinary morbid causes.

A

COMPLETE PRACTICAL TREATISE,

&c., &c., &c.

PART I.

SYPHILOID DISEASES.

CHAPTER I.

BLENNORRHAGIA.

FOR the purpose of bringing the subject of venereal diseases in a clear and methodical manner before my readers, I shall adopt the arrangement of M. Ricord, pointed out at pages 22, 23, of the Introduction.

ORDER I.—Comprehends the non-virulent venereal affections, called syphiloid by M. Ricord.

Definition.—By the term syphiloid diseases are meant those affections which follow sexual intercourse, reproducing themselves daily, often contagious, but not depending upon a special cause—non-inoculable.

Under this order is included *blennorrhagia*, and its consequences; *excoriations*, *herpes*, *eczema*, and all other affections the result of sexual intercourse, not included under the second order, or *virulent affections*.

BLENNORRHAGIA, from *Bλεννα*, mucus, and *Πεω*, to flow, signifies a discharge from mucous membranes, consisting usually of mucus, and depending upon inflammation of that membrane, being to the urethra, vagina, or conjunctiva, what bronchitis is to the bronchi, with this difference only, that blennorrhagia most usually depends upon, or is contracted in, sexual intercourse.

GONORRHOEA.—The disease here spoken of, under the term blen-

norrhagia, has been successively known by a variety of names. Among others, authors have employed the term *gonorrhœa*, derived from *Γονη*, semen, and *βλεω*, fluo, it being supposed that the disease depended upon a discharge of semen.

The impropriety of employing the term *gonorrhœa*, at the present day, will at once become evident ; in the first place, it is objectionable, inasmuch as the discharge which attends it does not contain semen, and it is by no means applicable as a general term (in the manner I have proposed to employ the word *blennorrhagia*) to the affections of mucous membranes. Thus, when the disease affects the uterus, under causes other than those of contagion, we fear we should be altogether misunderstood if we spoke of *gonorrhœa* of the uterus. By choosing another term, I hope gradually to wean the minds of practitioners from the idea that *gonorrhœa*, as they call it (*blennorrhagia*, according to my views), is always the consequence of contagion, although they are unable to distinguish it, except by the cause.

CHAUDE PISSE is the term employed usually in France in non-medical language, derived from *chaude*, hot, and *pisser*, to urinate ; but though graphically describing one of the symptoms very frequently present, still it is objectionable, as many patients, particularly females, do not complain of scalding in making water, when the affection is confined to the upper part of the vagina.

PUSORRHœA is the name given to the disease which we are describing, by a French writer : he wishes to imply, that the affection gives rise to, or is accompanied by, a discharge of pus. Now, although it happens that pus is mixed with the discharge, still it alone does not constitute the affection, for I shall presently show it to consist of muco-pus, and the quantity of the latter secretion will differ greatly. The inconvenience, therefore, of using such a term will be at once apparent.

ARSURA is another term that old writers employed to designate this disease, as they supposed it to be a species of purgation to man, and replaced menstruation in the female, which in their opinion was the outlet of bad humors.

CLAP.—This term, now commonly employed in England, is derived from the French term *clapier*, meaning a dépôt of matter, or anything that is filthy. The impropriety of using such a term in this work need not be dwelt upon.

MUCITE.—The physiological school in France applies this term to *blennorrhagia*, implying a simple inflammation of the mucous mem-

brane. The propriety of adopting this term will be considered hereafter.

CATARRHAL INFLAMMATION is another term by which this disease has been known, and Capuron has spoken of it as *a venereal catarrh*, not implying, by that term, that it depends upon a principle distinct from inflammation, but wishing to use the term *venereal* as I have done in speaking of venereal affections, viz., that the disease is a consequence of sexual intercourse.

CATARRHAL PRIMARY SYPHILIS.—In the valuable work on the Venereal Disease, by the late Mr. Wallace, I find blennorrhagia described under this term. Notwithstanding such an authority, I think no term could be more improper, as it brings us back to that period when gonorrhœa and syphilis were supposed to arise from one and the same virus.

BRENNING is the last term of which I shall speak ; and it is here mentioned, more to complete the history of the synonymous terms, than with the intention of recommending it as a general one to describe the disease in question, arising as it does from so many causes.

After a careful consideration of the terms which are and have been in use, I come to the CONCLUSION that the use of the term blennorrhagia presents the fewest objections, although, like the others, it may be cavilled at. In the following pages, then, it will be employed, and although derived from *Βλεννα*, mucus, and *Πεω*, to flow, still it is not intended to express that the discharge, which is a consequence of the disease, consists only of mucus ; it is rather a muco-purulent discharge, as any one may readily satisfy himself.

In making use of this term, let not the reader consider that the disease depends upon anything specific, or different from common inflammation ; for, after a close study of uncomplicated cases we can find no reason for agreeing with those authors, who seem disposed to admit a blennorrhagic virus, or, in other words, to distinguish *gonorrhœa* from *leucorrhœa*.

Blennorrhagia is then defined to be a simple inflammation of the mucous membrane, a consequence more or less direct of sexual intercourse, not necessarily, although often, contagious ; this last character depending upon a morbid secretion of the stimulating matter, which, acting on another mucous membrane, will occasion a blennorrhagia, but will (on inoculation) produce no disease of the cellular tissue into which it is introduced. In fine, blennorrhagia differs in no respect from other inflammations of mucous membranes, otherwise than in its

usual situation, and in the manner in which it is contracted. Blennorrhagia thus considered may occur in nearly all the mucous membranes. In the male, the urethra or prepuce may become diseased; in the female, the vagina, utcrus, &c.; and in both sexes, the conjunctiva and rectum. The affection, as far as my personal observation has gone, does not attack either the buccal or nasal mucous membrane.

The epithelium alone may be the seat of the affection, or the substance of the mucous membrane may participate in it; lastly, the follicles may become affected, or the sub-mucous cellular tissue be simultaneously or consecutively attacked. (See pl. I. & II., figs. 1, 2, 3, 4.)

CAUSES OF BLENNORRHAGIA.—The causes of blennorrhagia, considered in reference to mucous membranes generally, may be divided into two classes, the predisposing and exciting.

Predisposing Causes.—Under the head of predisposing causes, age may be cited as an important feature. Infants are found to be more predisposed to the affection than adults, *cæteris paribus*; and this predisposition seems to depend upon the delicate state of their mucous membranes. Who that has seen the treatment of new-born children, is not acquainted with the fact that they are particularly liable to blennorrhagic affections of the eyes, glans, and prepuce, from causes that would fail to give rise to the complaint in adults?

The sex has likewise its influence as a predisposing cause; it is an indisputable fact, that the female is more liable to discharges of a blennorrhagic character than the male.* In Paris, says M. Ricord, woman may be said to have habitually a discharge, call it what you will, leucorrhœa, gonorrhœa, *fleurs blanches*, &c.: it affects all ages and all stations. "Were I called upon," adds the same author, "to estimate the proportion of discharges in the male and female, I should say that it is a hundred times greater in the little girl than in the boy; a thousand times greater in the adult female than in the male."

The temperament plays its part, likewise, as a predisposing cause. Every individual who is subject to congestion, or an œdematous state of the mucous membranes, is predisposed to blennorrhagia;

* M. Lisfranc, in his clinical lectures, is in the habit of stating, that, being called one day into the country, to perform an operation on a washerwoman, he amused himself, out of scientific curiosity, during the time his assistants were preparing the necessary apparatus, in examining the linen of the Parisian ladies, a load having just arrived (for his patient did the washing on a large scale). He found that evident symptoms of blennorrhagic discharges were present upon nearly all. This may give the reader an idea how common the disease must be in the French capital.

hence the lymphatic temperament is a strong predisposing cause. It may be here stated, that preceding blennorrhagic affections predispose the individual to future attacks; hence people are sometimes said to be subject to a blennorrhagic diathesis: but such a term has been abused; it is no more correct than to speak of a sore throat diathesis. Daily observation, nevertheless, proves that any portion of the body which has been the seat of disease is, *cæteris paribus*, more liable to become a second time affected, than one which has not been previously affected. This applies especially to mucous membranes, as a tumid state of parts, and a liability to a return of the hypersecretion, remain long after the cure of the blennorrhagia.

Locality.—*Habitation* is another predisposing cause: in a cold, moist climate, or in damp situations, blennorrhagic affections are more common than under opposite circumstances.

The *season* of the year is not without its influence. In spring and autumn, discharges from mucous membranes are more common than in summer or winter.

Hygiene is daily found to predispose, more or less, to the same effect. Under this general term mention should be made of the influence of *clothing*. Light and imperfect clothing may be considered as one of those causes which predispose females in the higher ranks of life to discharges of a blennorrhagic nature. They will usually, whatever be their station, sacrifice comfort to appearance; hence the *mignon* shoe and the open-worked stocking are worn, in spite of the cold feet they produce: a chilliness of the extremities follows the insufficient quantity of woollen under-garments, and gives rise to what are called white discharges. The peasant-girl, who protects herself from the cold by woollen petticoats and worsted stockings, observes M. Ricord, is not subject to leucorrhœa. Hence we may draw the practical lesson of strongly recommending warm clothing in cases of blennorrhagic affections.

Having passed in review the principal predisposing causes, let me now speak of those that may be considered more directly to act as *efficient or exciting causes*.

EXCITING CAUSES.—*Food* of a stimulating, heating nature, as well as salt provisions, act as exciting causes. Beer, of all beverages, has been more especially accused of this effect, but on insufficient grounds; it is, however, certain, that of all beverages it is the one which will the soonest bring back a discharge when taken during convalescence. In Germany, the students who drink beer, though of a weak kind, to great excess, know this so well that they avoid it

most particularly when laboring under blennorrhagia, and I had occasion to see cases where the discharge was recalled by even one glass of that liquid. They consider their red wine of the greatest benefit, and find that a bottle of their strongest Rudesheimer does not so much harm as one glass of beer.

Among other articles of food, asparagus has a tendency to produce blennorrhagia; hence its use should always be forbidden to patients liable to the affection in question. There are, in fact, certain persons who can not eat that vegetable without having an urethral discharge on the following morning.

The use of cantharides is often followed by the same effect.

It has been stated that horse-exercise will produce, in the female, this affection. Frequent and long-continued sexual indulgence, or too severe continence, are likewise said to act as exciting causes, and so I believe they may, when predisposition exists.

While, on the one hand, M. Jourdan thinks that onanism is one of the most common causes, M. Ricord entertains a different opinion. Far from supposing that masturbation is always followed by blennorrhagia, I imagine it to be a strongly exciting cause. The following case shows that there exists some reason for this opinion. During the period I performed the duties of Externe, under Professor Velpeau, at La Charité, a mother brought into the hospital a little girl of three years of age, affected with a white swelling and a discharge from the vagina. She stated that the infant was in the constant habit *de s'amuser*, as she called it, and when left alone, repeated continually this mal-practice. She further traced the habit, so early commenced, to a plan which nurses in France have of tickling the genital organs of children who are peevish. This, for the moment, quiets them; but infants repeat these manipulations even at a very early age, as this case proves. On inquiry, I found that this was not an isolated case, and leads in after life to most vicious propensities.

Local irritation, or mechanical causes, such as bougies, pessaries, calculi, or any substance that individuals introduce into the vagina, rectum, or urethra, will act as causes of the disease. On this subject, M. Ricord states, that a woman was brought into the wards of Dupuytren, complaining of great pain in the vagina. On examination by the *toucher*, that eminent surgeon was not a little astonished at finding his finger opposed on all sides by a wall of porcelain, when, after sundry efforts, a large jam-pot was pulled out, which this female had introduced so far that she herself was incapable of withdrawing it.

Enemeta have been accused of causing blennorrhagia, probably on insufficient evidence ; but their employment may recall a discharge when it is getting well.

There are certain pathological or morbid states of the constitution which occasion the disease in question. Thus scrofula, gout, cancerous affections, various skin diseases, secondary symptoms, particularly the *mucous tubercle*, have undoubtedly this effect.* M. Ricord related a case, during the last winter, of a female who was affected with an herpetic affection running along the whole length of the vagina ; the disease lasted eight days, and gave rise to a discharge which ceased with the eruption.

Labor may be considered as not an unfrequent cause of blennorrhagia ; the lochia, instead of disappearing after the usual time, become irritating, and give rise to chronic discharges. ·

Inattention to Cleanliness.—There is no one cause, perhaps, among those I have previously mentioned, which gives rise to blennorrhagia so frequently as inattention to cleanliness. Women, more especially, are liable to much blame on this score ; they wash every other part of the body, but, unhappily for their own comfort, as well as that of their husbands, they seem to be averse to let clean water reach the vagina. Such neglect of cleanliness is not found in the case of prostitutes only, but is met with in many other women. Certainly those who have the direction of young females would do well to remedy this inattention. M. Ricord states that all ranks would be benefited by sundry hints on this subject.

Menstruation has its influence in producing the affection in question. Of this fact no people were more aware than the Jews ; and we find it strictly forbidden in the Mosaic law to have connexion with a woman about this period, and no doubt it arose out of the fact that such intercourse was found to propagate blennorrhagic affections.

* A good illustration of this happened in one of the patients at the venereal hospital during the last winter. A man came in suffering under various secondary symptoms, particularly the *mucous tubercle* (*condyloma*) around the anus. He drew my attention to a discharge which proceeded from the umbilicus. On examination, a mucous tubercle was distinctly recognised in this position, and M. Ricord took the opportunity of showing it to his class : no doubt many of my countrymen will remember well the case. Now here is the secretion from the tubercle giving rise to a blennorrhagic discharge. Had such a case occurred in the vagina, most persons would have considered that the gonorrhœal or leucorrhœal discharge, as it would there be called, gave rise to secondary symptoms, whereas the converse is true. Moreover, as mercury is of the greatest advantage in curing secondary symptoms, and was here employed with advantage, so would such treatment be cited as a further proof that gonorrhœa and syphilis are one and the same affection.

Worms.—Intestinal worms exert an influence in producing the disease; as they may act by occasioning a sympathetic action between the rectum and vagina—irritation in the one organ is felt generally in the other; or again, by the passage of the worms from the anus to the vulva. M. Ricord states that he has seen a case where he could distinctly trace the blennorrhagia to this cause. I have met with several cases of blennorrhagia in children, which show the importance of medical men being acquainted with this fact. The following may prove interesting. A woman brought a female child to the hospital, which she had left very much to itself, as she was obliged to go out to work during the day; and observing a discharge on its linen, questioned it, and said that she believed a boy had given the disease to the child. On further interrogation, this was by no means so evident; the mother had asked the child if she did not play with such a boy, and the child replying in the affirmative, she concluded the boy had ravished her child. A dose of scammony brought away a great quantity of worms, and the child got perfectly well. Renal and vesical affections, as well as haemorrhoids, will act in the same way in producing discharge from the male and female organs of generation.

Reflections on the foregoing Causes.—Having now passed in review those agents which can be rationally considered as predisposing and exciting causes of blennorrhagia, I may observe that, thus considered, it presents nothing that is specific; it may arise under the most varied circumstances and causes. Its existence in the male or female, therefore, is of itself no proof of *libertinism*; it may occur in the most modest as well as in the youngest child. Hence, in medical jurisprudence, the necessity of being guarded in our opinion, and the surgeon, in family disputes on the subject of contagion, should be especially cautious, and always lean to the weak side.* Thus the opinion of Tod, viz., that blennorrhagia depends upon a specific virus,

* I have at present under my care a case illustrative of this, and how much good a medical man may do in arranging those family disputes arising from blennorrhagia. A very respectable looking female applied to me for a discharge of twenty months' standing, which she asserted her husband had given her. On examination, a large ulceration of the neck of the uterus was observed. This patient stated, that twenty months before she had miscarried, and the discharge had been increasing ever since; and as she had observed stains on her husband's linen, she was sure he had gone astray, and that she had contracted the foul disease from him. He denied the accusation, and accused her of infidelity, and they led a most unhappy life. In about three weeks after, this female was cured, the husband soon got well, and they are now perfectly satisfied that the affection in the one was the consequence of the miscarriage, and the clap in the other a consequence of the previous affection in the female.

is no longer tenable. But this leads me to speak of *contagion* in reference to blennorrhagia.

Contagion.—I have previously avoided, except in the definition, even alluding to the possibility of this affection being contagious, in order that I might comprise that subject in a separate paragraph. Every one well knows that it is by contagion that this disease most frequently extends itself; and some have imagined that it is only in such a way as this that it can be contracted. This opinion has, however, been shown to be incorrect.

Whenever, then, the word contagion is used, let it be understood to mean, that if the muco-purulent secretion from any of the foregoing causes of blennorrhagia comes in contact with another portion of previously healthy mucous membrane, either in the same individual or in another, it will, in many cases, but not in all, produce a similar affection; not, however, in virtue of anything specific in the muco-pus, but as a consequence of simple irritation—like any chemical irritant, in fact.

But it is not always enough to bring the secretion in contact with a healthy mucous membrane, in order to produce blennorrhagic affection. There are various circumstances which must be combined, to produce the effect, although we can not always seize upon them. Every individual exposed to contagion is not affected, any more than when exposed to a draught of air he should be seized with coryza, although his neighbors on the right and left may be attacked by it.

In some cases we arrive at, or suppose we know, the cause of this circumstance. ~~Thus~~ we may say that habit, or, as the French call it, *acclimattement*, may account for the impunity or manner in which some individuals are exempt from the affection. The following case will illustrate our position—we borrow it from a collection of memoirs published by M. Ricord. A companion to an elderly lady was in the habit of receiving a lover who was a very old friend; and during a long intimacy contracted no disease, although this lady, his mistress, suffered under a discharge. It happened that a second lover presented himself, who was previously perfectly free from disease. No sooner, however, had this young man enjoyed her favor, than he found himself attacked with a discharge, although the original lover, notwithstanding frequent intercourse, was never seized with any affection. The second lover got cured of his complaint, and although he visited this lady afterward, he did not contract any fresh disease. But a third Lothario was, like his predecessor, subject to the same penalty for her first favor, and was in his turn rendered exempt from

a second attack. On examining the female, M. Ricord found there existed a catarrh of the uterus, which was more or less purulent, and a granulated appearance on the surface of the neck of the uterus was very apparent.* Now in this case it appears that habit prevented the original lover from contracting a blennorrhagia, although exposed in the same manner as the other two, who in their turn became insensible to a second infection. In this respect habit may have its influence, as in cases of certain fevers which are said not to attack the natives, but only strangers, who become, after a time, unaffected, although exposed to the same influences.

Although contagion is one of the most frequent causes of blennorrhagia, surgeons must not be too credulous, otherwise they will be liable to be often deceived. Women will frequently hatch up a story as to the manner in which they have contracted a discharge. It is not uncommon for nurses, for example, to account for a discharge which they may be subject to, by saying they have contracted it from the child they have taken in to nurse, wishing to make you believe that it is through the milk they themselves have become affected. If, on examining such children, no disease of the mouth or genital organs is found, the surgeon may flatly contradict them, as such a means of contagion is impossible.

Before quitting the subject of contagion, I should say a few words on certificates, a subject which annoys very frequently a medical man. In consequence of judicial inquiries, or family feuds, a female presents herself and asks the surgeon for a certificate to the effect that she is not subject to a contagious disease, or is not in a condition to communicate any discharge, under which she herself is laboring, to another person.

M. Ricord recommends that the surgeon write one to the following effect, having previously carefully examined the woman with a speculum, and finding no ulcerations :—

"I certify, &c., that ——— presents no symptoms of a *syphilitic* disease, but has a catarrh of the vagina, uterus, &c., and may probably [or not, as may be] communicate the disease to another."

No surgeon can be warranted in stating more.

EPIDEMICS OF BLENNORRHAGIA.—Blennorrhagia, in the preceding paragraph, has been considered as a sporadic disease, but it is represented by some authors as occurring epidemically. One of these so called epidemics, says M. Ricord, fell under my notice during the building of the Magdalene. An epidemic existed among the masons,

* See plate II., fig. 3, which represents a similar appearance.

and occurred to so great an extent that, when a mason presented himself as an out-patient, I immediately told him he worked at that building, and came to consult me for a clap ; and the poor fellow thought me a prophet, so sure was I to be right in my statement. This supposed epidemic simply depended on the collection of a great number of workmen together, who lived in common with a few women suffering under blennorrhagia. Such is the explanation of these so-called epidemics, and the word can not be more unfitly used as applied to such cases.

It will not, perhaps, be out of place here to say a few words on the period that elapses between exposure to the causes, and the occurrence of the blennorrhagia. The period is usually some few days, but will depend upon the greater or less reaction which takes place, as well as other circumstances, for a certain space of time always passes between the last connexion and the appearance of the disease.

Some authors have observed cases which occur so long after connexion, that they have been induced to believe in what is called *incubation*. Among others, Bell cites a case to prove this point. A person went on board a ship, where he could have no means of contracting gonorrhœa (adds Bell), and on the fiftieth day after being at sea, a discharge from the urethra appeared and continued some time. Here, then, is a case of gonorrhœa which was contracted on shore, and broke out at the end of fifty days ; the intervening time was the period of incubation.

Now, giving Bell all the credit for veracity, it does not seem necessary that we should come to his conclusion. Might not the man have contracted the discharge by certain mal-practices ? But even this was not necessary. It has been above stated that various causes will produce the disease, as well as contagion, particularly scorbutic complaints. Is it not more rational, then, to suppose that these very rare and exceptional cases depend on some cause above alluded to, rather than to believe that incubation exists, or that gonorrhœa may be concealed in the system, to break out when it pleases its good will and pleasure ?

I believe, in fine, that blennorrhagic affections are produced soon after the causes which excite them come into action. Circumstances may retard them two or three days : in this respect they resemble other diseases.

THE SYMPTOMS OF BLENNORRHAGIA.—A blennorrhagic affection may be ushered in by loss of appetite and the other signs of an in-

flammatory disease, constituting the general symptoms. These are, however, often absent.

The *local symptoms* consist in heat, a tension of the part, followed by increase of the natural secretions, which soon afterward tend to diminish, and may altogether cease, giving rise to that form which has been vulgarly called dry clap. It does not, however, remain long in this state, for the secretion again becomes not only increased, but altered, taking on a muco-purulent character, and the pus will preponderate in proportion to the severity of the inflammation of the cellular tissue. The discharge changes in color; at first it is milky, then more or less gray or green, or, in proportion as blood is mixed with it, it will have various shades. To these circumstances the patient will pay great attention. The odor, as well as the thickness of the discharge, will vary much.

The *course* of the affection will be either acute or chronic; however, the symptoms have usually a tendency to progress until about the twelfth or twentieth day. From that period it gradually decreases in severity. From being purulent, the discharge assumes a muco-purulent or simple mucous character; and lastly, only an augmented but natural secretion remains.

The *terminations* of the affection may be various. Soon after its invasion, the blennorrhagia may terminate suddenly, either under the influence of treatment, or without any reason that we can assign: such may be called *delitescence*. It has been supposed that the disease, after existing a certain length of time, may be cured locally and suddenly, but at the risk of being driven into the system and breaking out afresh in some other part; in other words, that a metastasis of blennorrhagia may take place, analogous to that which occurs in rheumatism. M. Ricord states, that after a careful consideration of cases where the affection is supposed to be driven into the system, and cases of this kind have been observed in his hospital from time to time, he is by no means convinced that a blennorrhagic affection is cured in one part of the body, merely to break out in another. From what he has observed as happening occasionally, he is induced to believe that some other affection may come on during, or coincident with, a blennorrhagia; which disease, acting on revulsive principles (as a blister or seton would), may moderate or cure the blennorrhagia. For instance, should a patient, during a gonorrhœa, be seized with any other affection, say fever, that may have the effect of producing such a revulsive action, that the discharge will for the time abate. I have seen this happen pretty often; but such is not

the opinion usually entertained. Persons believe, for example, that a gonorrhœa quickly suppressed by treatment will give rise to ophthalmia, swelled testicle, and rheumatism. On the contrary, I think it more probable that any one of the foregoing diseases may arise during the course of a gonorrhœa, and, if violent, will act as a revulsive; but the original complaint, instead of being cured, is only ameliorated for the time: it will return to its former severity. In this respect blennorrhagia resembles other affections of the system; and it is of use, in a practical point of view, to know that these affections are rather coincidences than caused directly by blennorrhagia driven into the system.

Resolution.—The most ordinary termination of blennorrhagia is by resolution; that is to say, a gradual diminution in the symptoms and secretions takes place.

Such has been always considered as the most favorable termination; but of this I shall again speak under the head of treatment. It will be there seen that I do not think a gonorrhœa should be allowed to go on unchecked, for a cure by delitescence is preferable.

Continuation under the Chronic Form.—Surgeons have usually stated that the affection may terminate in a chronic form. Such language is, however, not correct, as their so-called termination is undoubtedly but a continuation of the disease under a chronic form. M. Ricord observes, he was consulted by a military man for a gleet which he had been subject to for thirty years. Could it then be said that the blennorrhagia terminated thirty years ago, as he had suffered ever since that period? The acute stage of the disease may then terminate, or pass into a chronic one, which depends on various alterations of the tissues, consisting sometimes in hypertrophy, with induration, or with softening of the mucous or sub-mucous tissues.

PATHOLOGY OF BLENNORRHAGIA.—The lesions of the mucous membranes which result from blennorrhagia are numerous; yet very few specimens are preserved in even our best museums of pathological anatomy. Works on the venereal disease are equally deficient in information on these points. In books on this subject, one writer has copied another, and seems to have dissected books rather than bodies; hence, since the time of Morgagni, how few new pathological illustrations have we on the disease, and how seldom do we see the urethra opened in post mortem examinations! For these reasons I shall describe the subject in the following pages at some length. Hunter states it as his opinion, founded on the examination of the urethra of two men who were hanged while suffering under gonor-

rhœa, that this disease is attended with no changes of the mucous membrane. Other writers, in copying him, have been contented with this view, although they forget that a mucous membrane, wherever it is placed, is subject to certain diseases in common. Why should the urethra, then, be more exempt than other similar membranes? Observation of the genito-urinary mucous surfaces during life, as well as after death, have clearly proved, that either acute or chronic inflammation will produce such alterations in it as are not generally studied, much less known. By means of the speculum, the state of the female organs, in cases of blennorrhagia of these parts, has been sufficiently demonstrated; and from the analogy of the tissues, it might have been supposed that the same morbid appearances would be found in the male, could we observe his urethra. Gonorrhœa, however, seldom terminates fatally. The following appearances I can speak of, from direct observation, as occurring in the vagina, &c.

In acute stages of blennorrhagia, the mucous membrane is simply redder than usual in its whole extent, exactly resembling what takes place in *balanitis*, or what is commonly called gonorrhœa præputialis. (See plate III, fig. 1.) In some cases this redness, accompanied by a good deal of local swelling, puts on an erysipelatous character, which has induced Fabre to term it *gonorrhée seche*, as it gives rise to very little discharge.

In other instances there exist distinct patches of reddened cuticle or epithelium, surrounded by a healthy appearance of the mucous membrane. These patches are covered with little pieces of detached and softened cuticle, or spots, as seen in the drawing (plate III, fig. 3). All species of discharges may accompany these morbid states, and require to be removed before these appearances are distinctly brought into view.

In some places there may be erosion of the epithelium, and distinct granulations may be observed emerging from the body of the mucous membrane, as seen in plate I., fig. 2. Ulcerations of all characters may be met with in any point of the internal organs, as most Englishmen who have attended M. Emery's clinique have had ample means of observing, and as may be seen in plate II., A. fig. 1. When the disease is in a chronic state, I have often observed the mucous membrane paler than usual, but presenting at certain points a tumeffied appearance, and stripped of epithelium, or covered by pale granulations similar to those observed in cases of chronic inflammation of the conjunctiva. This condition of parts is very liable to bleed under slight causes. In some cases I have witnessed distinct vege-

tations in the whole course of the vagina, as well as at the orifice of the urethra. In plate III., fig. 2, vegetations are seen sprouting from the urethra of the male. This is the second case which I have observed during the last winter.

M. Ricord states he has, in two cases (examined after death), found distinct ulcerations, with an indurated base, situated on the mucous membrane, an inch and a half within the carunculae myrtiformes. The plate showing ulcerations of the urethra in the male will be given in a wood-cut, in the second part of this work. In neither of these cases was there any analogy to cancer or scirrhous disease.

In addition to the changes* above mentioned, distinct induration, or cicatrises, and other morbid appearances, may occur ; but any further description must be reserved for what we shall have to say on stricture.

With reference to the termination of blennorrhagia, it will be often found very uncertain, as every one well knows ; hence the tendency of patients to accuse unjustly certain women of giving them the disease, whereas a warm bath or a too copious dinner will recall a complaint which was on the wane.

Blennorrhagia may not only return, but recur at regular intervals. I have seen a few cases of this kind, which I may call *periodical*, as they were accompanied with intermittent fever, and seemed to depend upon irritation about the neck of the bladder. Certain other causes, also, may influence the return of blennorrhagia ; thus certain patients have an annual gonorrhœa, which follows the *carnival*. In these cases, drinking and dancing reproduce the discharge, if there is any predisposition.

These periodical attacks of blennorrhagia, again, depend upon causes which we are not able always to ascertain, independently of sexual indulgence. "I have," says M. Ricord, "seen more than one person attacked with gonorrhœa annually, in consequence of eating asparagus, and, on leaving off this vegetable, the discharge has ceased.

COMPLICATIONS.—In the previous pages, blennorrhagia has been described as it *may* occur ; but in a variety of cases it is not such a simple disease : numerous accidents arise during its course, and will be here described under the head of complications. The local swel-

* The illustrations which are annexed place these lesions now beyond a doubt, and I have had too many opportunities of showing their existence in England, to suppose that they are confined to Paris, and do not equally exist in this country.

ling may be so great that the urine may be prevented from passing along the canal, giving rise to retention depending upon an inflammatory stricture. The lymphatic vessels may become likewise inflamed, and buboes or swelling of the lymphatic glands result, as occurs after an irritation in any part of the foot. These buboes may be the result of a direct extension of the inflammation along the lymphatic vessels to the glands, or may depend upon sympathy, or that law of the animal economy which causes the one extremity of a canal or tube, when irritated, to swell or sympathize with the other extremity, without the intervening part of the tube or canal being sensibly affected. These last are properly called sympathetic buboes.

I have seen hæmorrhage occur during the course of a blennorrhagia, which, like other hæmorrhages from mucous membranes, may depend upon simple exudation from the surface, or upon the rupture of vessels around ulcerations, or from a varicose state of the venous system of the part.

Fresh exposure to contagion, as well as any excess in diet, by exaggerating the severity of a previously existing blennorrhagia, will act as a severe complication, by increasing the morbid condition of the mucous membrane.

Chancere is a frequent complication. It keeps up the irritation, and gives rise to a secretion, which, from its position, we can not always remove as soon as it is formed.

Constitutional syphilis has been above stated to be a frequent cause. It may likewise be a complication, as will appear in subsequent chapters.

I shall hereafter describe one of the most frequent complications, namely, epididymis, or what is usually termed swelled testicle; but it can not find a place here, as we are describing only what is general in regard to the affection, without reference to locality.

Notice has previously been taken of rheumatism occurring during the course of a blennorrhagia. Authors generally are not agreed upon the relation between these two affections; and having no fixed opinion, I therefore speak of it as a complication, observing, that rheumatism may come on during the time that a patient is suffering under blennorrhagia. I am, however, induced to believe that blennorrhagia is not the exciting cause, though it may be a predisposing one, of rheumatism.

THE DIAGNOSIS OF BLENNORRHAGIA.—From what has been above stated, it will appear at once that the diagnosis of blennorrhagia is

easy, characterized as the disease is by a muco-purulent discharge. There are, however, several points which are deserving of attention, as distinguishing the position, intensity, &c., of the affection.

The character of the discharge will often give the surgeon some notion of the exact situation of the disease. When he observes a glairy secretion, resembling the white of egg, he is justified in stating that the neck of the uterus is affected ; when the discharge is composed of muco-pus, he may be assured that it arises from the urethra, vulva, or vagina, &c. Some assistance may be derived likewise from chemical tests, to decide whence the secretion issues, as it is found that the muco-pus of the vagina is acid, whereas that coming from other sources is alkaline.

When the mucous membrane is alone inflamed, the secretion is formed almost solely of mucus ; when, however, the sub-mucous tissue becomes affected, we observe the secretion to assume a more or less purulent character in proportion as this tissue is affected.

The existence of blood, mixed with muco-pus, will generally lead the surgeon to expect an ulceration of the canal, which he can not examine. But here there are many sources of error, as blood may be poured out in consequence of excessive inflammation. Usually, however, I have been able to distinguish, or at least to suspect, the existence of a chancre, from the appearance of the discharge, when it has a grayish or reddish tint, and is of a thin consistence ; and inoculation has frequently proved these surmises to be correct. I shall not here stop to point out the error of those who consider that, because blood is mixed with the blennorrhagic secretion, the disease was contracted from a woman during a menstrual period.

Lallemand of Montpellier has, in his late work entitled "Les Pertes Seminales," laid great stress on the existence of semen in these discharges of a chronic character. A careful examination, however, should be made, before it is asserted that the spermatic fluid is present, as what is often called semen is nothing more than the prostatic fluid, which is to be distinguished from the former by its containing no animalcules, when viewed under the microscope. When semen is present in the discharge, we may usually affirm that blennorrhagia has reached the opening of the vesiculæ seminales, and, by the irritation it produces, gives rise to the ejaculation of semen, which becomes mixed with the secretion. The acute may be distinguished from the chronic stage in the urethra, by the former being accompanied with pain in making water, and the secretion being purulent ; whereas the latter is accompanied by no scalding in

making water, and the secretion is mucus. It will hereafter be found that the existence of the one or the other stage occasions a great difference in the treatment.

A very important point of diagnosis may be drawn from the existence of the complication of chancre, as it enables the surgeon to decide whether a blennorrhagia is of a virulent or a mild character.

This point has been very much contested ; and although the expressions virulent and mild are often met with, yet no two medical men are agreed upon the use of these terms. I shall, before explaining my own opinion upon this point, say a few words on the various suppositions which have been brought lately forward.

Supposing that a male or female is laboring under a blennorrhagia, the question to be decided is, whether it be a virulent or a mild affection. Some surgeons state that, before coming to an opinion, we must wait for the occurrence of secondary symptoms ; if they appear, it is a sufficient reason to call the blennorrhagia which has preceded, a virulent complaint. This opinion is just ; but we would ask, of what use is a diagnostic sign which can be only given at so late a period, and when we have arrived at the diagnosis it is of no further use to us, as probably the blennorrhagia is cured ?

Other authors have considered the existence of buboes as the distinguishing character of the two forms of the disease ; but, as will hereafter be shown, no dependance can be placed upon this sign, for any simple irritation on the foot, &c., will give rise to buboes ; therefore the mere circumstance of buboes, without reference to the pus they secrete, demonstrates nothing.

Some, again, state that a virulent blennorrhagia follows connexion with a suspicious subject ; whereas a mild affection may follow connexion with a modest woman. These distinctions, founded on the consideration of the causes, can not be adopted. Is the opinion on a subject like this to be based on the supposed or presumed morality of one woman over the other ? Does not daily experience show (says M. Ricord) that girls of the most tender age, as well as persons holding high social positions, can and do contract virulent complaints, and may communicate these to persons who have connexion with them ? Let not the fact of a disease being contracted from a more or less (apparently) virtuous woman be the means of founding a diagnosis.

Little dependence can be likewise placed on the opinion of those who state that the green color, as well as the presence of blood in the discharge, or the breaking out of the disease a long time after

connexion, can enable us to distinguish a virulent from a mild blennorrhagia.

Not long since, at the Academy of Medicine, it was stated that the duration of the disease may serve as a distinguishing feature of the two forms. A virulent complaint was stated as likely to last forty days, and a mild one twenty. This, however, is a very erroneous opinion, as will presently be shown.*

The acute nature of the complaint, and the existence of ulceration, has been also cited as proving the existence of a virulent affection. This will likewise be shown to be incorrect.

Induration of the canal, pain on pressure at a particular point, and the possibility of taking the impression of an ulceration with the *porte empreint*, or bougie armed with wax, have been cited as so many pathomimetic signs of the virulent form. It will hereafter be found, however, that these form but a probable diagnosis, as induration is by no means a constant character, and any simple ulceration will give rise to pain, and an impression may be occasioned by folds of the mucous membrane.

I believe that authors have had ample reason for separating blennorrhagia and its discharges into two forms, which they have called virulent and mild ; but I have before stated, that, previous to M. Ricord's investigations, they had completely failed to state on what circumstances they depended, nor could they by any one symptom distinguish one form from the other. As this is of great importance, I may be excused if I dwell somewhat longer on it, particularly as many other facts that I shall hereafter describe, depend upon the clear comprehension of this subject.

The previous views of authors show how much difference of opinion existed on this subject when M. Ricord undertook to show that the cause of a virulent blennorrhagia depended upon the complaint being complicated with a *chancre*. In women, more especially, he found that what was called a virulent gonorrhœa depended upon the existence of ulcerations, which could not be discovered by an examination of the external organs of generation, but which the use of the

* M. Puch, one of the surgeons of the Venereal hospital, has stated to me that he can distinguish a mild from a virulent blennorrhagia by the period which elapses between the appearance of the discharge and the previous connexion. For the observation of a great number of cases of a mild blennorrhagia proves that the usual period is from a few hours to as many days ; on the contrary, in a virulent affection, the interval between connexion and the first appearance of the discharge is from seven to fifteen days. That this is often the case, no one will doubt ; but, if relied on, it may lead to many errors in practice.

speculum clearly proved to exist. But did all ulcerations give rise to a virulent gonorrhœa? was the next question to be solved. At the time this eminent surgeon was investigating the subject, he often had occasion to treat the woman from whom some of his male patients had contracted the disease, and he found that there were various forms of ulcerations, the secretion of which caused simply a mild gonorrhœa. There existed others, however, which caused sometimes chancres on the glans penis and prepuce; on other occasions, virulent gonorrhœas. In vain did he try to distinguish these ulcerations by their physical characters. It was only by inoculation that he was enabled to prove why sores similar in appearance gave rise to such different consequences. Inoculation soon showed him that there may exist an ulceration of a *specific* character, which will be described in its proper place, and called chancre; but there likewise exist ulcerations of a *simple nature*, the result of an inflammatory state of the mucous membrane, which were frequently the consequence of a blennorrhagia. From this moment, that which was previously doubtful became clear, and an inquiring and observing mind like his was not long in deciphering what had been the *opprobrium medicorum*.

From what the speculum showed clearly to exist in the vagina, he naturally concluded that similar appearances might exist in the urethra of the male, but which, from its small size, it was impossible to demonstrate. However, one opportunity of examining the urethra, followed soon after by a second, put him in possession of two cases, which he showed to the Academy of Medicine, in which chancres existed in the whole course of the urethra. (See cut on page 169.) He thus discovered the key to this hitherto difficult labyrinth, and concluded that the only diagnosis between virulent and mild blennorrhagia is derived from inoculation.

The experiments, frequently repeated, of inoculating with the secretion of a simple mild blennorrhagia, produce only a slight irritation, which subsides in a few hours; whereas, if the complaint is virulent, or, in other words, depends upon, or is complicated with, a chancre which is concealed, or which can be brought into view by the speculum, the secretion introduced under the skin, in a similar way as in the former experiment, will produce a vesicle, pustule, and chancre, as seen in the drawing (plate IV., fig, 1, *a*, *b*, and *c*). This, then, I call the *certain pathonomic* diagnosis of a virulent blennorrhagia. A rational diagnosis may be drawn from the rosy, thin, serous, or rusty color of the discharge, provided such be present, as

well as from an indurated spot in any point of the canal, accompanied with fixed pain, &c.

Should buboes follow, which on inoculation give rise to the characteristic pustule, it may be asserted confidently that the blennorrhagia is a virulent one. The occurrence of secondary symptoms, which only follow in a few cases, gives a further diagnosis of the same fact.

It is, however, the rational diagnosis that the surgeon must usually depend upon, as inoculation can not always be proposed, or he may find patients object to submit to it. He must, however, remember that it is but a rational one, and on such data be cautious how he risks his reputation by giving an opinion.

THE PROGNOSIS OF BLENNORRHAGIA.—The prognosis, with reference to the probable duration of the disease, will depend in a great measure on the mucous membrane which is the seat of the disease. It is proved by experience that, when the conjunctiva or urethra is affected, a cure will not so readily ensue as when the prepuce or glans penis is attacked. When the uterine surface suffers, the surgeon may feel assured that the complaint will resist treatment longer than when the vulva or vagina is affected.

The same principle holds good in relation to the portion of the canal affected. It will be found that the disease will be more difficult to cure in proportion as it has gained the deeper portions, or such as are the farthest removed from the external openings. Hence it is, that blennorrhagia of the vagina or prostatic portion of the urethra are so intractable to treatment.

If the blennorrhagia has existed but a short time, the cure will probably be speedy, and the more amenable will it be to plans of treatment, and *vice versa*. An acute attack of the disease will be cured easier and more speedily under treatment than the chronic form.

The prognosis of the surgeon will be much modified by the circumstance of his patient having or not having been previously attacked with blennorrhagia. If he has previously had a blennorrhagic affection, the present complaint will be probably less severe, but more rebellious to our means of treatment.

It is evident that the occurrence of the various complications will modify considerably the prognosis. On this point I shall not insist, reminding my reader only that improper hygiene and treatment are very liable to produce them, especially the formation of abscesses along or around the parts affected.

Under the head of prognosis, it may be as well to consider a few of the questions which patients put to surgeons, more especially as it will enable me to state some important facts, and attempt to destroy some popular prejudices.

A patient will sometimes ask the surgeon if the treatment he is about to prescribe will give rise to a stricture or a swelled testicle. It is a very common error to suppose that the treatment will occasion either of these complaints ; and this, like many other popular errors, has taken its source in medical writings, which have stated that a blennorrhagia speedily cured will give rise to various other complaints. M. Ricord says, we may state distinctly that no ill consequences are to be feared from any treatment, provided it is not grossly improper. If (pursues that surgeon) I were disposed to be aphoristic, I might say that the ill consequences will be few, in proportion as the cure is speedy ; and I defy any one to produce a case cured in twenty-four hours from its commencement, which has been followed by any ill consequences. There are prejudices against speedily curing a blennorrhagia, and I may be told by some surgeons, "after a practice of full thirty years, I am of an opposite opinion." But I ask, may not such a practitioner have labored under a mistaken notion during thirty years ? Is implicit belief in a fact, for that space of time, a proof that that fact is true ? Has not an old author said, and very truly, "*experientia fallax*?"

In addition to the questions relative to prognosis which the surgeon will be called upon to answer, he may have to reply to the following : Shall I, or shall I not, be subject to secondary symptoms ? To answer this question, a surgeon must of course ascertain if the blennorrhagia be virulent or not. If it is a mild affection, he may, with every assurance, quiet the fears of his patient.

If there be reason to suspect that he is suffering under a virulent form of the complaint, it does not necessarily follow, even then, that secondary symptoms will ensue ; for if the chancre can be cured previously to the third day of its existence, no such symptoms ever will appear, and the shorter the subsequent duration of the chancre, the less probable will be the chance of infection ; and if no induration attend it, most probably no secondary symptoms will follow. In my opinion, however, too great caution can not be used ; tell your patient that the complaint is complicated with chancre, otherwise he may lay to the score of your treatment effects which really depend upon the existence of the chancre, or his own neglect.

Under the head of prognosis, I must consider the greater or less

probability of transmitting a blennorrhagia. On this score, patients are usually very inquisitive, and surgeons should be particularly guarded in any opinion they may give. Whately asserted, that as long as a discharge was merely white, there was no fear of communicating it. Bell states, that if the secretion consists of mucus, we need entertain no fear on this head.

M. Ricord considers that when the secretion is reduced to a thready mucus, which is transparent like vermicelli, contagion is not to be dreaded. On the contrary, as long as the secretion is purulent—a fact to be ascertained by simple inspection, or by means of the microscope, whatever may have been the duration of the disease—it is capable of causing a similar complaint in any mucous membrane with which it comes in contact.

Should, therefore, any pus be present in the secretion, the surgeon ought never to sanction sexual intercourse ; if the secretion be not purulent, let him wait some days before he gives his permission, to see if it does not become so. Impress strongly on your patients the necessity of abstaining from sexual intercourse as soon as any pus appears mixed with the secretion. Patients will sometimes ask the following question : “ I am obliged to have connexion with my husband ; now, doctor, I am suffering under a discharge—what complaint will he contract from me ? ” Inoculation will alone answer the question, and the surgeon will at once be able to tell the probable consequences. The same question relates to marriage ; “ and patients,” says M. Ricord, “ present themselves to me to know whether they may marry, for often their fortune may depend upon a marriage. I persuade them against it, if they have a simple gonorrhœa, but if it be a virulent complaint, I wash my hands completely of the affair. If they still persist, I tell them that they may give a gonorrhœa to their wives which, unless cured previous to confinement, may cause a loss of eyesight to the child : called, however, afterward to cure the lady, I attempt to explain the affection which she has contracted, by speaking of the fatigue of the honeymoon, as well as the *dîjeûner à la fourchette*, and in the interim cure both parties, of course forbidding connexion. Such is the part that a medical man often has to play, and many disputes in married life may be thus avoided, and the surgeon must, in these cases, lend himself to deception.”

THE TREATMENT OF BLENNORRHAGIA.—In studying the history of the treatment of blennorrhagia, it is curious to see how it has differed at various periods, being modified by the notions which medical men of the day entertained on its nature and causes. When it was

a prevalent idea that blennorrhagia depended upon, or consisted in, a loss of semen, such remedies were prescribed as surgeons supposed capable of checking *spermatorrhea*.

At a later period, when humorism was in vogue, the discharge was supposed to consist of pus; and as it was thought to chase the bad humors from the body, care was taken not to check the discharge—the supposed outlet of various disorders. When we consider that medicine was but little advanced at this period, we are not surprised that this doctrine should have kept its ground for a long time; but is it not astonishing that these prejudices are still entertained by many enlightened men, although they reject the ancient doctrines of the humoral theory? It is lamentable to find that many of the practitioners of the nineteenth century are not more advanced than were those of the fifteenth, and obstinately resist any line of treatment which has for its object the cutting short a disease, for fear of consequences which they can not describe. "My treatment," says M. Ricord, "is opposed completely to this opinion. I allow a discharge to continue no longer than I can help. It is never my intention to prolong the discharge; if it continue, it is in spite of my treatment, which has been ineffectual in checking it."

When, about the time of Fernel, blennorrhagia was first arrayed under the class of syphilitic diseases, and confounded with them, mercury of course was used in the treatment of both complaints, which were considered synonymous, and many and severe were the cases of salivation which resulted from such a confusion.*

Notwithstanding the distinctions which modern practitioners have introduced, and although it is generally believed that the two affections differ *in toto*, still at the present day many surgeons prescribe a course of mercury either during or after a blennorrhagia; some consider that small doses of mercury are advantageous as a species of alterative treatment. I shall have occasion to condemn this line of practice at a future period.

Sydenham, who, in other respects, all must so much admire, was in the habit of prescribing purgative medicine, and, from his statement, appears to have met with great success; but from my personal experience (says M. Ricord) I can not corroborate his opinions.

* I lately saw, in the hospital of St. Bartholomew, a case which must formerly have been very common. An ostler had suffered from clap. Several weeks previous to coming to the institution, he went to a quack living in the city, who recommended Leake's pills, composed of mercury, and an aperient occasionally; his mouth became sore, and his clap got worse. This charlatan then recommended him to apply to a public institution. Under proper treatment he rapidly recovered.

Tod and his school have much eulogized the use of diuretics, under the supposition that frequent micturition might make the diseased humor pass out of the system. M. Ricord, in his appreciation of this treatment, has found no other effect result, except that of causing an acute attack of blennorrhagia to pass to a chronic one, which is by no means desirable. These various plans of treatment had successively held their sway in the medical world, when Bell proposed that a direct or local treatment should be resorted to ; but useful as these means may be in some few cases, it will be soon apparent to the surgeon that no one universal panacea can be recommended. Blennorrhagia, like all other diseases, will and must be treated according to the indications present.

Having attempted to establish the fact that at its commencement a blennorrhagia is a local affection, that the number and severity of the accidents which follow depend not only on the severity, but likewise on the duration of it, I should state that it does not at once acquire its greatest severity, and, moreover, that it is not one of those affections which run a certain course, or last a certain time. I have attempted to prove that suppuration is not necessary to chase the peccant humors from the body, and that we have no occasion to allow the discharge to continue during an indefinite period.

I have shown that the fear of driving the discharge into the system by a rapid cure, or that of its causing certain accidents, is chimerical, and the opposite proposition has been established, that the sooner the patient is cured, the less he is exposed to these accidents. It follows, then, that the surgeon should attempt by his treatment to prevent the development, and to diminish the intensity of the symptoms when he has been unable to check them at the onset, and in all cases to shorten the period of their duration as much as possible. We may now divide the subject of treatment in the following manner :—

1. I shall speak of the prophylaxis, or the preventive means.
2. Of the abortive* treatment.
3. Of the curative treatment.

Prophylaxis, or Preventive Means.—It follows, as a consequence of the knowledge of the causes, that it is impossible always to prevent the occurrence of the disease, as it may arise spontaneously under circumstances over which the patient has no control ; yet he may be able, in the greater number of cases, to prevent the occurrence of the affection by avoiding the causes that, as above stated, give rise to

* By the term "abortive" treatment, I wish to express such means as cut short the disease before it can be completely established.

it; or, if the surgeon can not persuade a patient to avoid them altogether, at least he may often be able to induce him to take such precautions as will render the occurrence of the disease less probable or less severe.

Such precautions, then, I now proceed to describe.

1. As they relate to persons already affected, so that they do not communicate it to healthy individuals who may in any way expose themselves to the contagion.

So large a number of females suffer under discharges, that, were the surgeon very cautious, he should, perhaps, forbid connexion altogether; for M. Ricord states, that ninety-nine women and a half in every hundred, during some part of the month, suffer more or less from blennorrhagia. It is impossible, however, to forbid connexion altogether. But supposing a woman to be subject to an habitual discharge, she may, by taking certain precautions, prevent those who have connexion with her from contracting it. She should abstain from all heating or irritating dishes or beverages; and she should employ frequent injections of a slightly astringent or cooling nature, especially previous to connexion.

2. The precautions to be taken by a sound individual who exposes himself to the contagion, should consist in not prolonging the venereal act, and in making water immediately after it;* but the means which place the patient most indisputably beyond the possibility of contracting blennorrhagia, is the use of the *condom*. "This practice," says M. Ricord, "is not sanctioned, it is true, by nature, yet Astruc has long since recommended it, and in practice there are many cases in which the surgeon is forced to prescribe connexion once or twice a week, as he would do aperient pills. Although, therefore, a practice not to be lightly sanctioned, I must recommend it in some cases, for without it the mucous membrane of the urethra would infallibly inflame."

These, then, are the only means which a surgeon can depend upon or recommend, to place his patient out of danger of contagion. The host of other specifics which charlatanism has invented, I shall not here stop to enumerate.

The Abortive Treatment.—It has been stated above, that one of our principal objects should be to shorten the period of the duration of blennorrhagia, and to check it at the onset. This we should attempt to effect in two ways, either by general, or local and direct means.

* The use of injections into the urethra is prejudicial, as they serve only to push the contagious matter farther into the canal.

The following, or the abortive treatment, is, however, only applicable previous to the occurrence of the symptoms of acute inflammation—that is to say, during the first few days after the disease has declared itself.

The *general means* will consist in abstaining from all irritating or heating food ; not, however, that we prescribe an entire abstinence. A moderate use of nutritious diet should be recommended, as we believe general debility, of itself, tends greatly to produce a discharge from mucous membranes. Small quantities of fluids should be taken, and warm baths or any relaxing agent should be strictly forbidden, unless there be reason to expect that the complaint depends upon an irritability of the skin or the quality of the urine ; in these exceptional cases alone, baths and copious drinks should be allowed.

In addition to these precautions, rest and quiet of the affected parts must be strongly recommended.

Internally, the surgeon should prescribe the use of the anti-blennorrhagic remedies, which seem to act by their revulsive action on the intestinal canal, such as cubeb, copaiba, and turpentine. The doses in which they should be administered will be further alluded to, when mention is made of the particular forms of the complaint. When I say that their action is or ought to be a revulsive one, I do not wish to be supposed to recommend their use so as to produce gastritis. On the other hand, however, these preparations should be given in sufficiently large doses, and at short intervals, so as to produce a sudden effect on the system. Various powerful quack medicines owe their efficacy as anti-blennorrhagics to this mode of action. The surgeon, however, in the use of these means, must not discontinue them too quickly, but gradually diminish the dose. By such means the cure will be found to be permanent.

Externally, various revulsive remedies have been in vogue. In some cases, the Russian or vapor bath, which acts by determining to the skin, will completely cure a patient in a very short time. Blisters have likewise been employed with the same view, but, generally speaking, they are prejudicial.

Direct or local means have been employed with the object of cutting short the affection ; under this head I may mention compression. This treatment has succeeded in some few cases, but, generally speaking, it is not only useless, but prejudicial. It is only in urethral blennorrhagia that we can employ it ; and here it produces erections by day and pollutions at night, which again occasion congestions, the forerunners of inflammation.

Local baths are likewise to be avoided, as they tend to increase rather than to diminish the secretion. However, ice and cold washes (provided no reaction follow) may be attended with great benefit. Separation of the surfaces of the mucous membrane will be among one of the direct means from which the surgeon may derive much advantage; for, as we have previously observed, one diseased mucous surface reacts on the other, and augments the mischief. In addition to these means, great attention must be paid to cleanliness; but, generally speaking, the greatest dependence should be placed upon injections of various astringents or tonic substances, the nature and strength of which will be spoken of again under the head of *regional forms of blennorrhagia*.

Provided, however, these means fail in curing the patient, or if the surgeon be consulted at a late period, when symptoms of acute inflammation are present, it will be in vain, and even dangerous, to pursue any longer the treatment above spoken of, as it would tend only to augment the mischief. It therefore must be given up; and this leads me to speak of the third division.

The Curative Treatment.—The first stage, or the acute form, particularly if the inflammation be severe, may require general or local bleeding; usually, however, M. Ricord recommends leeches, taking care to employ them in sufficient quantities, and never applying them on those parts where the skin is doubled on itself and maintained by a loose cellular tissue, such as on the scrotum, eyelids, or penis; for although twenty cases might be cited in which no ill consequences have arisen, still the twenty-first is liable to be followed by gangrene or erysipelas; and as equal advantages follow their application on the surrounding parts, namely, the groin, perineum, or temples, the surgeon should never expose his patient to the danger of these accidents. In virulent blennorrhagia, especial care should be taken that the leeches are not applied on a depending part of the body, otherwise, if the secretion falls, or comes in contact with the leech-bites, inoculation will result, and a distinct chancre will be formed on every leech-bite. I saw a case of this kind at the female venereal hospital, where thirty chancres existed on the perineum, in consequence of the application of thirty leeches, prescribed by a *sage femme*.

Leeches sometimes will produce an erythematous irritation and swelling of the neighboring glands; therefore it will be well for the surgeon to apprise his patient that this is probable. Poultices and rest will, however, soon cure this affection.

Baths.—In the preceding section I have condemned the use of

baths ; but in this, the acute stage, they are of the greatest benefit, when employed of such a temperature as is agreeable to the patient's feelings. Provided no reaction comes on, the patient may continue in the bath for half or three quarters of an hour. In other cases their use should be omitted. Local bathing is prejudicial, as tending to cause congestion of the part.

Injections are in some cases useful : in the vagina they wash away the secretions ; but in a narrow canal like the urethra, they cause great irritation.

Diluent drinks may be freely employed, as they tend to render the secretions less irritating. The composition of them must depend upon the taste of the patients, as it is the water they contain which is beneficial. The use of diaphoretics should be strictly forbidden, for reasons stated above.

The state of the digestive organs should be attended to, as all mucous membranes sympathize with the stomach ; constipation or diarrhoea must, therefore, be avoided. In addition, the horizontal posture should be prescribed ; strict attention to diet, avoiding everything that can excite, particularly beer, asparagus, &c.

This terminates what I have to say on the treatment of acute blennorrhagia. I now, therefore, turn to the chronic form, which is called blennorrhœa.

TREATMENT OF BLENNORRHŒA.—The first point in the treatment is to omit the antiphlogistic remedies, as they have become useless the instant that acute inflammatory symptoms have subsided. In their place the surgeon should prescribe those remedies which were recommended under the head of abortive treatment. Warm baths must be now avoided ; the diet should be more nutritious, but not stimulating. In addition, a general revulsive treatment, combined with a local or direct one, should be prescribed ; for experience proves that, although a cure may take place when either mode is employed singly, still, when conjointly employed, they act more surely and effectually.

The revulsive general treatment consists in the employment of copaiba, cubeb, turpentine, purgatives, diuretics, astringents, tonics, iodine, and cutaneous revulsives. I have arranged them in the order of their efficacy.

Copaiba is placed in the first rank, for this oil has enjoyed a reputation for being a specific, or at least of having a special action on blennorrhagic affections. It is, in fact, one of the most powerful agents that we employ in the treatment of this disease. By some

surgeons it has been given in all stages of the complaint, and many have vaunted its virtues in the acute stage. M. Ricord states that he feels convinced it may occasionally be useful in this stage, but that it is usually inefficacious. The result of my experience on the administration of this substance (continues M. Ricord) leads me to the following conclusions on its therapeutic effects.

In the acute stage of a blennorrhagia, it produces no amelioration; on the contrary, it often gives rise to ill consequences which we should avoid, and in some cases aggravates the disease itself. Administered in the acute stage, it has this further disadvantage, that, if it produce no good effect, the surgeon is deprived of one of his best agents, as the stomach gets out of order and will not bear it at a later period.

The action of copaiba is manifested in certain effects on the stomach, intestinal canal, skin, urinary organs, and, in some few rare cases, on the nervous system.

The effects of the remedy are first evident on the stomach, as it produces a disgust; vomiting often follows, and this occurs to such an extent that we have known persons feel sick on coming into a room where the oil is kept. In cases where this unpleasant effect is produced, the surgeon may feel convinced that no good will result from continuing the preparation, as it will only tend to occasion inflammation of the stomach, without diminishing the discharge. In cases of gastritis, which come on especially in persons predisposed, the other mucous surfaces will become sympathetically affected or inflamed.

Usually the action on the intestinal canal is but slight—particularly confined to the small intestines. Sometimes, however, colic and diarrhoea follow. This we consider, when present in a slight degree, to be a good sign, as it by no means betokens inflammation, but shows that the revulsive action is taking place; still the surgeon should watch carefully that inflammation does not succeed, or run too high.

It has been stated that copaiba has a decided action on the urinary organs. It seems as if the specific good results arise directly from the action on the urinary organs; for, unless absorption take place, and the oil pass off by the urethra, the same good effects are not apparent; and a further proof is, that this preparation is especially useful in gonorrhœa. Given in the other forms, it appears to produce little or no effect, viz., in blennorrhagic ophthalmia, blennorrhagia of the rectum, vagina, &c.

On the skin, the action of the remedy is no less apparent, producing various eruptions, most frequently one which resembles measles, or nettle-rash; eczema likewise sometimes follows its administration, as it does after eating seafish.

To produce these complications—for such may these eruptions be called, there must exist some predisposing cause, which usually consists in a stomachic derangement: a moist state of the atmosphere, exposure, &c. These should be carefully avoided during the time that the patient is taking copaiba; this is the more necessary, as the surgeon will be blamed for their occurrence.

The eruption is usually preceded by a general lassitude and drowsiness, and sometimes by shivering, accompanied with a general itching or irritation of the skin.

The eruption will continue as long as the use of the copaiba is persisted in. Let the surgeon only cease to employ it, and in a few days every trace of the skin affection will disappear. Such an announcement to your patient will free him from much anxiety. I have observed these affections to occur epidemically, particularly during spring and autumn. These have, by some authors, and Gibert among the rest, been stated to depend upon, or bear a relation to gonorrhœa, as secondary symptoms do to syphilis; but we shall not here stop to prove the absurdity of such an opinion.

Lastly, it has been stated that copaiba sometimes acts in an unusual way on the nervous system. During the same month, M. Ricord states, he has known the administration of enemata, containing six drachms of copaiba, followed, in the case of a female, by an apoplectic attack; in another case, likewise a female, by hemiplegia, which ceased on the breaking out of a rubeolic eruption over the whole body.

The dose of copaiba must vary according to circumstances; formerly, surgeons were in the habit of prescribing only a few drops; however, Bell, Swediaur, and others, have given the oil in much larger quantities—that is to say, in doses of from $\frac{3}{4}$ to $\frac{5}{4}$; and this last-mentioned quantity has been given without any ill consequences following. My practice (says M. Ricord) is to begin with a drachm, and gradually augment it until some visible good or bad effect follows; but I think that the dose should never exceed $\frac{3}{4}$ in the twenty-four hours, for fear of ill consequences. If we believe certain practitioners, one would be led to suppose that this remedy is more efficacious when administered by the rectum, as an enema, than when taken into the stomach. M. Lisfranc, especially, is one of the

French surgeons who relies greatly on this form of administration. I have personally watched the treatment, but can not say I have been persuaded that it is a preferable plan, as it required a larger dose, and a longer time to cure the patient ; and the quantity employed was enormous.

I think that, as the beneficial effect is particularly marked on the small intestines, and not on the rectum, the copaiba should be given by the mouth ; and this brings me naturally to consider the form under which it may be administered.

Daily experience proves the truth of the following proposition, viz., that the efficacy of the preparation will depend upon the greater purity in which it is given ; hence the superiority of those in which the oil is simply held in suspension.

On the other hand results the inefficacy of many preparations which apothecaries have invented to cover the smell and taste of this drug. Among these, I may speak particularly of its combination with magnesia ; a means of solidifying the oil, and thus administering it in pills. These hard balls pass through the intestinal canal without any effect.

Latterly, the copaiba capsules have been introduced into practice. They consist of a little shell of gelatine or gluten, which encloses a small quantity of copaiba. The inventors assert that oil thus given produces no unpleasant smell or taste, nor do eructations follow. This, however, is not true ; the taste and smell are rendered less disagreeable, but, generally speaking, the characteristic taste of copaiba remains in the mouth after taking them, though not to so great a degree. Many individuals are unable to swallow them, or the little shell may burst, or at once become dissolved in the stomach, and then all the unpleasant effects of copaiba remain.

The capsules of M. Mothes are not so objectionable as the rest ; they are smaller, and the oil is mixed with a very small quantity of magnesia : hence they have not the same tendency to break, but pass on into the duodenum, where the oil escapes without occasioning eructations.

The dose is usually six or eight capsules in the twenty-four hours.

As long as the copaiba gives rise only to slight colic or diarrhœa, without any accompanying symptoms of inflammation, these symptoms may be allowed to proceed, provided the blennorrhagia gets better under its use ; but should no amelioration follow, the diarrhœa must be checked by combining the copaiba with opium, or some astringent preparation, such as the rhatany, &c.

Constipation should be relieved by gentle cathartics ; when there is no effect on the urinary organs, it will be well to order a little nitric æther ; if the stomach be irritable, great advantage may be derived from the use of the bicarbonate of soda.

In employing, then, copaiba, we ought not to use exclusively any preparation, but prefer one or the other according to circumstances.

I will now speak of another preparation, which has evidently anti-blennorrhagic properties, namely—

Cubebs.—In appreciating the value of the powdered cubebs, it should be stated that it yields only to copaiba in efficacy ; and notwithstanding the objections that have been urged against this remedy, I consider its use of great benefit.

On the stomach, cubebs acts like the pepper tribe generally in exciting that organ. Its curative powers are exerted more especially on the small intestines ; but, instead of producing diarrhoea, like copaiba, cubebs occasions constipation. We must, therefore, combine it with purgatives. In some cases, this powder irritates the stomach to such a degree that gastritis ensues. The surgeon should be aware of this, and leave off administering it on the occurrence of the first symptoms. This is one of the reasons for preferring copaiba ; another is, that cubebs is very liable to adulterations, which are not easily detected. M. Ricord states in his lectures that he has met with two very serious cases where he suspected an adulteration ; the dose given did not exceed six drachms, and the two patients obtained the powder from apothecaries in different parts of Paris ; yet, an hour after taking the medicine, vertigo, trembling of the limbs, dilatation of the pupil, together with convulsions, occurred.—In one case, erysipelas, followed by gangrene of the thigh, came on, and the patient sank in twenty-four hours. The remainder of the cubebs was analyzed, yet no adulteration could be detected ; the papers, however, were not observed to be greasy, as they usually are. On the other hand, its cheapness, the fact of the stomach supporting its use, as well as the smell being less penetrating in the room in which it is kept, and, lastly, no eruptions following its employment, have made it a standard remedy at the venereal hospital, and in private practice with M. Ricord. Notwithstanding, I believe copaiba to be the more efficacious of the two remedies for the cure of blennorrhagia.

The dose is usually from a 3*j.* to 3*ii.* of the powder ; but among the out-patients of M. Ricord, I have rarely seen more than 3*iiij.* prescribed during the twenty-four hours. He finds from experience that

it is better to begin with this quantity, as the stomach feels at once the effect of it, and does not habituate itself to its use, as happens when we order smaller doses and gradually increase them.

The mode of administering this remedy is usually in powder, and when taken it should be mixed with water. In this state it is far more efficacious than in combination with other ingredients ; its action seems more direct. M. Ricord has found that the tincture, decoction, or pills, are very inferior to the powder alone. Of late, chymists have contrived to enclose cubebs in capsules of gum, and the plan is a very good one. The combining cubebs with copaiba is bad, as the effect generally is not so well marked, and we should prefer reserving the one remedy for cases which are rebellious to the other.

It seems to act particularly on the urinary organs, as it gives a very peculiar smell to the urine ; and it is especially in blennorrhagia of the urethra that its good effects are visible. Cubebs and copaiba may, then, be said to be anti-blennorrhagics *par excellence*, although other preparations have been equally vaunted.

The administration of *turpentine*, in the opinion of some surgeons, is attended with good effects ; but it should be ranked among the adjuvants to a cure, rather than as a remedy.

Tonics.—In the chronic stage, complicated with a lymphatic temperament or scrofulous constitution, the best results will often follow the administration of bitters and tonics, in conjunction with a reasonable quantity of wine and nutritious diet. Vapor baths, shower baths, and sea-bathing, are adjuvants which no surgeon should neglect in chronic cases.

Blisters, placed as near the diseased parts as possible, particularly when the discharge depends upon a change of structure of the mucous membrane, deserve well the attention of the practitioner.

Here I terminate my observations on the general treatment of blennorrhagic affections, and shall now direct the attention of my reader to what may be called—

The Direct Treatment.—This consists in checking the discharge by local applications, which form a numerous list, comprising solutions of lead, zinc, the protoioduret of iron, sulphate of alum, corrosive sublimate, and particularly nitrate of silver.

As I shall have occasion to speak of these various preparations at a later period, in describing the treatment of the various regional forms, I shall now pass them over, reserving the description of each of their properties and doses until then. Leaving the description of

blennorrhagia, I shall pursue the plan I have previously laid down, and describe the disease as it may occur in one or the other sex, and in the different mucous membranes.

CHAPTER II.

BLENNORRHAGIA IN THE MALE.

THE forms of blennorrhagia peculiar to the male are balanitis and gonorrhœa ; affections of very great importance to the surgeon, and which I shall successively describe at some length.

SECTION I.

BALANITIS.

Synonymous Terms.—English writers have described the complaint here spoken of, under the name of balanitis, by the terms gonorrhœa præputialis, bastard clap, external gonorrhœa, &c. Of late years it has been generally known in France by the name of balanite, the equivalent term for which I shall employ in the following pages.

Definition.—Balanitis consists in inflammation and patchy excoriation of the glans penis and lining of the prepuce, accompanied by a muco-purulent discharge.

Causes.—The *predisposing* cause of balanitis is undoubtedly the existence of the prepuce, for we do not meet with the affection in persons who have been circumcised.

The *exciting* cause can be usually traced to the application of some irritating secretion, such as the menstrual fluid, blennorrhagic matter, &c. ; but, although frequently of venereal origin, this affection often depends upon other causes than impure connexion. I have frequently occasion to see it in boys who are inattentive to cleanliness, and allow the secretion of the glandulæ odoriferæ to accumulate between the prepuce and glans.

I have been able to trace it to a discharge from the urethra, produced by stone in the bladder, or by the passage of instruments. The surgeon should be aware of these facts, otherwise he may fall

into the error of attributing to infection the simple effect of inattention to cleanliness. I might cite more than one instance where this has occurred. "The prepuce," adds M. Ricord, in one of his clinical lectures, "is an appendix to the genital organs, the use and object of which I could never divine; in place of being of use, it leads to a great deal of inconvenience, and the Jews have done well in circumcising their children, as it renders them free from one of the ills of humanity. The prepuce is a superfluous piece of skin and mucous membrane, which serves no other purpose than acting as a reservoir for the collection of dirt, particularly when individuals are inattentive to cleanliness."

As I stated above, the disease may affect either the prepuce or glans; part only, or their whole surface, may be the seat of the inflammation. It is particularly liable to occur in the neighborhood of the frænum.

The *symptoms* of the affection are the following: a slight itching, which is soon after succeeded by heat and pain of the part, attended by an increased secretion of the glands, which becomes more or less purulent. The prepuce soon swells, in consequence of a tumefaction in the cellular tissue, which so largely enters into its composition, and this swelling may occur in a very short period. Not unfrequently an inflammatory or erysipelatous condition succeeds this œdematosus state, and may be confined to the prepuce only.

Usually no pain is felt in making water, nor does any chordee exist. In a few cases, however, when the urine passes over the inflamed prepuce, a scalding is felt, and in erection the glans may become too large for the swollen parts around: a pain like that experienced in chordee may occur, and it is very difficult, when phymosis exists, to decide whether the balanitis is accompanied with gonorrhœa or not.

Balanitis is usually acute in its progress, but it may become chronic. Its termination is commonly favorable; however, gangrene sometimes ensues, as well as erysipelas, more especially if the surgeon applies leeches on the diseased and œdematosus prepuce. The surface of the glans and prepuce frequently becomes irregularly excoriated, resembling a blistered surface, as seen in plate III.

Complications.—Balanitis, however, is not always the simple affection I have here described. In some instances abscesses may form, in consequence of the collection of matter between the glans and prepuce, which is swollen or narrow, or a circumscribed inflammation of the cellular tissue of the prepuce result, terminating in abscess.

In either case, these collections of matter will point at the upper part of the penis, and gangrene will often attack the prepuce, and, destroying it, the glans penis will become exposed, as seen in plate V., fig. 3. Gangrene rarely commences at any other point than this, and may destroy the whole penis, or be limited to the prepuce, as was the case in the individual from whom the drawing was taken. This tendency of the prepuce to become gangrenous at its upper part has been variously accounted for. Some suppose it to depend upon the greater number of vessels in this situation ; but it more probably arises from the friction against the trowsers, to which it is subject in all the movements of the body.

A very frequent complication is chancre, which, masked by a narrow prepuce and purulent discharge, leads the surgeon to believe that the patient is suffering under simple balanitis.

Secondary symptoms may become also a complication. Thus the mucous tubercle occurring on the prepuce, which is already the seat of a balanitis, will increase the disease ; it will likewise be one of the causes of it. Hence we have what is called, improperly, *a syphilitic balanitis*, for the complications produce or exaggerate balanitis, not in virtue of any specific poison, but as a consequence of the secretion, which is very acrid. Eczema, particularly in old people, will constitute a complication, and, like vegetations, will be more difficult to cure, in proportion as the surgeon is unable to expose the glans.

Balanitis, without any complication of chancre, may cause a bubo. This, however, is rare, and we seldom find that buboes arising from this cause suppurate ; they are merely sympathetic, and when they do suppurate, never give rise to virulent sores capable of being inoculated.

Secondary symptoms never arise as a consequence of simple balanitis. Such is the result of M. Ricord's researches on inoculation. I have never heard a case of simple balanitis cited which was followed by secondary symptoms. M. Cullerier, who supposes that a simple gonorrhœa may give rise to them, says he has never seen a case of balanitis which he could trace as the cause of constitutional syphilis.

M. Puch, one of the surgeons at the Venereal hospital, considers that simple balanitis may produce a chancre, and thus induce secondary symptoms. He inoculated a patient affected with simple balanitis, unaccompanied by chancre, but in whom vegetations existed. The characteristic pustule was observed, and he had the kindness to

show me the case, and concluded that simple balanitis, without ulcerations, may give rise to syphilis. This conclusion I can not adopt, for the following reasons: He admits, himself, that it is an exceptional case to see the inoculation succeed; he has observed it in two cases. M. Ricord has never met with similar results. It is, therefore, natural that we should seek an explanation of it in some circumstance beyond a simple balanitis. I believe that many circumstances may explain this occurrence. The patient, before entering the hospital, had connexion, and as his prepuce was long, the syphilitic virus may easily be supposed to have remained within its folds without producing chancres, as the glans was covered with mucous and smegma; for we find that the virus does not produce its effect until it comes in contact with the mucous membrane or skin, or till an abrasion results, or it is introduced into a follicle. The virus may remain on the prepuce inert, provided there is a secretion which protects it, in the same way that it may be kept in glass tubes, and yet at the end of the eighth day produce a chancre. I believe, then, that the true explanation of these exceptional cases depends upon some such cause.

The *diagnosis* of balanitis is very easy, provided the surgeon can uncover the glans, and see in what state it is; but when phymosis is present, the practitioner is often at a loss to know whether a simple balanitis exists, or if it be complicated with a gonorrhœa, chancres, or vegetations. In these cases, an induration may often be felt on the prepuce, and, on interrogating the patient, it will be found that a chancre existed before the phymosis took place; but if no induration exist, and if the patient have not examined the penis, our diagnosis will be very imperfect. Still one means is within our reach—it is that of inoculation.

The *prognosis* will depend upon the complications present, for simple balanitis presents nothing unfavorable.

The *treatment* of balanitis in uncomplicated cases is very simple. It consists in washing the parts, and separating the prepuce from the glans by means of a piece of lint; this alone will usually suffice to cure the patient. When all other local applications have been tried, I have seen patients, whom other practitioners have had under their care for six months without benefit, consult M. Ricord, and this simple treatment cured them in a few days. The piece of lint may be about an inch and a half long, and half an inch in breadth. Having washed and dried the affected parts, apply this piece of lint between the prepuce and glans at its base, and then draw the former over the

glans, taking care to change the lint two or three times in the twenty-four hours.

When an inflammatory condition of the parts exists, it will be well to pass a stick of caustic over them, simply to whiten the surface, which should be previously dried by lint ; and during the subsequent days the surgeon should order a wash containing—

Liq. Plum. Subac. 3*i.*

Aq. Distill. 3*viiij.*

and dry lint to be constantly kept between the glans and prepuce.

When balanitis is complicated with chancre, of course we must employ the treatment which the latter complaint may require, and which will be described in the second part of this work.

The complication of phymosis presents some difficulties, as it is often impossible to act directly on the diseased parts. The first thing to be borne in mind is, that we must not operate on the prepuce whenever we can avoid it, particularly if the phymosis be not habitual. Instead of slitting up the prepuce, M. Ricord's plan is to wipe away all the secretion, and introduce a stick of nitrate of silver between the glans and prepuce, and cauterize slightly the parts. The immediate consequence is considerable augmentation of pain, which may last for half an hour, but on the following day the amendment is very marked. Baths, and injections containing opium, are useful, but not so advantageous as cauterization : it is the best antiphlogistic remedy with which I am acquainted.

If the surgeon, however, be consulted at a later period, when the gangrene is imminent, or has already commenced, the prepuce should be freely slit up without delay, so as to expose the part ; and compresses of cold water, or solutions of opium, should be constantly applied.

The indications for cauterization, or for incision, are sometimes obscure. When, however, the discharge consists of thick pus, we should cauterize, and the patient thus preserves the prepuce, for in a few days he is able to uncover the glans ; moreover, if there be a chancre, an incision is very prejudicial, as it most probably will inoculate the divided surface.

The indication for slitting up the prepuce consists in a discharge of ichorous matter, or when the skin is of a dark livid color. If the surgeon do not operate in these cases, nature herself will form an opening.

In cases of balanitis, the surgeon should be particularly cautious that the glans is not left uncovered, as inflammation and swelling may occur, and paraphymosis result.

SECTION II.

GONORRHœA.

THE next form of blennorrhagia I am about to describe, as it exists in the male, is *gonorrhœa*.

Synonymous Terms.—M. Ricord calls it urethral blennorrhagia; some French writers denominate it venereal catarrh; in England it is vulgarly known by the name clap, derived from the French word *clapier*, signifying a filthy abscess; and in France the common people call it *chau de pisse*.

As the term *gonorrhœa* is generally accepted, I shall employ it, rather than change the name of the affection, and at once proceed to treat of the conditions which tend to its development.

Causes.—The unnatural size of the male organ, as well as a large meatus, tend to augment the chances of contracting a gonorrhœa. A relative disproportion between the genital organ of the male and female will be a very frequent cause of the development of gonorrhœa.

It is probable that the introduction of the gonorrhœal matter takes place previous to ejaculation, and that it is the expulsive force with which the semen issues that washes away the contagious matter; for, unless such were the case, I am convinced that gonorrhœa would be still more common than it is.

During erection, and previous to ejaculation, the meatus has a great tendency to open. The round form of the glans further promotes this tendency, as it is pressed laterally when passing the vagina, and this naturally separates the lips of the meatus. Some writers, not content with this explanation, believe that gonorrhœa does not occur from the introduction of the pus, but they suppose that absorption from the external part takes place, and that the virus is directly carried into the glands of morgagni, which are situated just within the fossa navicularis.

I have sufficiently, I hope, under the general head of blennorrhagia, spoken of the direct causes of the affection; I shall not here, therefore, return to the subject, but at once describe the *situation* of gonorrhœa. Every part of the urethra has been successively considered as the seat of the disease; in addition to the fossa navicularis, the

vesiculæ seminales and the prostate gland have been by different writers pointed out as the parts from which the secretion takes place. My own opinion is, that any part of the urethra may become affected, but the exact point will in a great measure depend upon the time the affection has lasted ; undoubtedly the fossa navicularis is the point most frequently affected, as Cockburn stated long since.

The *symptoms* of gonorrhœa consist in pain felt in the course of the urethra, particularly at the fossa navicularis. As M. Jourdan has observed, this point seems the *rendezvous* of all the morbid sensations of the penis, so this sign alone can not be of great value ; but when, together with pain, the surgeon observes a muco-purulent discharge coming from the urethra, he may at once infer that gonorrhœa exists. The pain which is felt is sometimes slight and of an agreeable kind —if this term may be applied to pain ; whence the belief that gonorrhœa proceeded from the vesiculæ seminales. More frequently, however, the pain is severe ; patients speak of their urine scalding them, or that they feel needles pricking them, especially when the urine is loaded with salts, or when it is passed in a large stream. In the acute stage of gonorrhœa there is frequently a difficulty in making water, a circumstance which arises in part from fear of the pain which accompanies the passage of the urine, and in part, likewise, from the swollen state of the mucous membrane and the narrowness of the canal.

These symptoms do not exist long without chordee, sometimes of so violent a nature that authors have spoken of a distinct variety (*chaude pisse chordée*), in consequence of chordee being the most prominent symptom.

This chordee depends upon an inflammation of the corpus spongiosum, and a secretion of plastic lymph into its interstices. It consequently loses its elasticity, and in erections can not follow the corpora cavernosa in their varied movements ; hence the curvature in different directions, either downward, laterally, or otherwise. Chordee will be severe in proportion as the penis *naturally* varies in size between the quiescent state and during erection ; hence, in persons whose penis enlarges but little in erections, chordee is seldom present. Chordee is likewise a symptom which is more severe in proportion as the gonorrhœa has gained the deeper portions of the mucous membrane ; when the affection is confined to the orifice of the meatus, the chordee is proportionably slight.

Various morbid sensations, such as cramp, pains in the testicle, a feeling of tension in the groin, pricking in the perinæum, frequent

desire to make water, sometime incontinence of urine, or tenesmus of the bladder, are present, and may add to the severity of the case.

These symptoms increase in proportion as the gonorrhœa gains the deeper portions of the canal; hence, Bell has described varieties which depend upon the presence of one or other of the foregoing symptoms. He has distinguished gonorrhœa of the bulb, prostate, neck of the bladder, and bladder itself. Instead of admitting these distinctions, I shall consider them only as signs that the gonorrhœa has reached certain portions of the canal; for example, the pain in the perinæum causes us to suspect that the prostate participates in the disease—tenesmus, that the bladder is inflamed, and so on.

The Diagnosis of Gonorrhœa.—Every tyro in medicine will at once distinguish what he calls a clap, by means of the symptoms above described; but such a person may not be aware that a surgeon can not always decide at once whether a man is suffering under a gonorrhœa or not, provided no discharge be observed, and the lips of the urethra be not inflamed, and no stains seen on the linen. M. Ricord gives the following instance of the occasional difficulty. He was ordered by a magistrate to give an opinion whether a prisoner, said to have violated a girl, was laboring under gonorrhœa or not. The accused presented no swelling of the lips of the meatus; on pressure, no discharge came from the urethra, and there existed no traces of any secretion on the shirt. When interrogated, he stated he had made water six hours previously to the examination. As M. Ricord had some suspicion, he ordered him to pass his urine at once, and desired one of the jailers to watch his prisoner. In six hours after, M. Ricord returned, and then found undoubted marks of an existing gonorrhœa. The prisoner confessed that he had made water previously to the first examination, and had taken care to remove the secretion as soon as formed, by a piece of lint which he concealed for that purpose.

The diagnosis of gonorrhœa of *the various portions* of the urethra I have above spoken of, and shall not repeat what was then said, except to observe that these distinctions are of importance, as they lead the surgeon to foretell the probability of this or that complication arising; for instance, a swelled testicle, or inflammation of the bladder; and the patient is not thus taken by surprise, and does not accuse the surgeon of bad treatment.

The *prognosis* must be drawn from the general and local symptoms, which it is unnecessary for me here to refer to.

The *complications* which may occur are numerous. We may, in

the first place, find abscesses in the fossa navicularis, and they exist more frequently than surgeons think. They commence in the small follicles, which exist in great abundance in this portion of the canal. Inflammation of the prostate gland is another complication. Hæmorrhage comes on sometimes as a consequence of rupture of the urethra when individuals wish to overcome a chordee, a practice formerly recommended, and occasionally followed by the unenlightened. Swelled testicle, as well as buboes, are among the complications which I may mention here, but I shall treat of this subject in full at a future period. With respect to buboes accompanying a mild gonorrhœa, they are very rare ; we may estimate their occurrence once in a hundred cases of gonorrhœa ; they seldom suppurate, and are never of a specific nature ; they disappear under simple treatment. In scrofulous patients buboes occur, not in proportion to the severity of the gonorrhœa, but in virtue of the lymphatic diathesis ; and balanitis is not an unfrequent complication.

Chancre may likewise occur in any part of the urethra, giving rise to what the French call a *chancré larvé*. Of the existence of this complication, any one who has seen much practice must have had ample proof.

M. Ricord has kindly furnished me with a drawing of a urethra in which chancré is seen in its whole extent. (See cut, p. 195.) Such cases, however, are very rare ; he nevertheless possesses two examples. I shall not here stop to reconsider the manner in which the virus is introduced into the urethra, as it is similar to that described under the head of Introduction of Gonorrhœal Matter, with which it is often combined. A knowledge of this fact, viz., that chancré may exist concealed from view, is of the greatest practical importance ; it at once explains a host of difficulties that previously did not admit of solution ; it points out the difference between a virulent and mild gonorrhœa, and explains those rare cases of secondary symptoms which follow, with various other points which it would be out of place to discuss here, but which are fully treated of in the second part of this work.

CHRONIC GONORRHŒA, OR GLEET.—The acute stage of gonorrhœa, either in consequence of non-treatment, or when treatment is injudiciously employed, may degenerate into a chronic stage, which is known by a diminution of the scalding in making water. The discharge, which was previously purulent, becomes mucous, though it continues abundant. In other cases, no running is observed during the day, but in the morning the lips of the meatus are found glued

together, and a very small quantity of discharge escapes ; on the linen it leaves a stain like that of gum. In some persons, no other traces of a discharge are found than various mucous flocculi, which resemble little bits of vermicelli ; they seem to come from the follicles in the urethra and prostate, and are a very plague to hypochondriacal patients who are haunted with the venereal disease ; and as they daily examine their urine, the existence of a thread of mucus of the size of a millet-seed causes them to post off to their surgeon to show him what they have found.

All the acute symptoms have passed, as well as redness of the lips of the meatus ; but chordee often remains, for it will be readily understood that the cause of this symptom is not so easily got rid of as the others, and it often requires a considerable period before the penis can regain its natural elasticity.

In chronic cases of blennorrhagia, when the affection is seated near the entrance of the vesiculæ seminales, nocturnal pollutions are frequent, attended with considerable suffering ; here the chronic inflammation causes the pollutions, and they react on the mucous membrane, thus forming a vicious circle, out of which it is very difficult to rescue the patient. M. Ricord states, that patients come to him, who, during the time that they are rapidly recovering from gonorrhœa, without having committed any excesses, find the affection suddenly return as bad as ever. On interrogating them, he often finds that the only explanation which can be given of the aggravation of the symptoms, exists in the occurrence of nocturnal pollutions.

Another frequent symptom of chronic gonorrhœa, is a difficulty in making water. Thus, after any slight excess in diet, &c , the patient will be suddenly seized with a difficulty or impossibility of passing urine. This depends upon a spasmotic stricture ; in other cases, upon an inflammatory state of the mucous membrane, brought on by exposure to cold, or overdrinking ; such causes irritate further the canal, and tend to keep up the discharge.

In place of a stricture, an opposite state of the mucous membrane may exist ; for instance, a want of contraction, or relaxed state of the mucous membrane, the result of a long-continued gleet. The urethra loses, in part, its contractility, and when the bladder has emptied itself, there remains a small quantity of urine in the canal, which the urethra can not dislodge, but which dribbles away, when the penis is in a dependent position, by the mere force of gravity ; this naturally stains the shirt, and ought not to be mistaken for gonorrhœa, although the irritation which this urine produces in the canal occasions that affection.

Impotence is again a result which sometimes follows a chronic gonorrhœa. I do not, however, wish to say that impotence is always due to this cause, as it may depend upon various circumstances. In the chronic stage of gonorrhœa, impotence depends upon the absence of erections, yet pollutions occur. Impotence in the acute stage is due to a swelling of the canal of the urethra, which prevents emission, although erections occur.

Lastly, impotence may depend upon moral causes ; and I believe that such is the cause in nine out of every ten cases of persons who consult the surgeon. Thus timidity has made more than one man impotent ; and in such cases it is only relative to certain women, not to all.

Hunter's prescription for impotence is about the best a surgeon can recommend—that our patient sleep with the woman with whom he is impotent, and make a resolution not to have connexion with her.

While on this subject, and as I can not revert to it, I may here state, that the best treatment for nocturnal pollutions, which occur to so great an extent in some young men that they never have erections, and whose health and spirits suffer considerably in consequence, consists in prescribing an enema of cold water, before going to bed, containing a small quantity of laudanum, together with the use of nutritious diet ; but no food should be taken for at least four hours before going to sleep. Instead of continence, the *fault* of such young men, let them indulge once or twice a week, and they will be suddenly surprised at finding that pollutions cease, and their health improves.

The Treatment of Gonorrhœa.—I shall treat of this subject as I have done that of blennorrhagia in general, viz., speak of the various plans to be followed in the abortive and curative treatment.

The Abortive Treatment.—At the commencement of a discharge from the urethra, and previous to any redness around the orifice, or pain felt in making water, the surgeon will frequently be able at once to cut short the affection and cure his patient ; under other circumstances, this plan will not avail. It consists, in addition to the general means spoken of under the head of abortive treatment of blennorrhagia, in employing, during the succeeding forty-eight hours, twelve injections of nitrate of silver at regular intervals : the strength of the solution of the salt should be two grains to the $\frac{3}{8}$ viii. of distilled water. Let the injections be then left off, and cubeb or copaiba be given in the doses above spoken of. If the cases be recent, and the disease not too far advanced, this treatment will succeed, fifty times in a hundred cases, in checking the disease, and there is no fear of

occasioning stricture or swelled testicle at this period of the complaint. Under this treatment the running will at once cease; but to complete the cure, it will be necessary to continue the cubebs, diminishing gradually the dose. No further recourse should be had to injections, as a continuance in their use would only tend to keep up irritation. At the end of fifteen days the surgeon may allow his patient to resume his usual habits.

The *direct treatment* consists in the employment of injections. Of all those I have seen employed, no doubt exists in my mind that by far the greatest benefit is derived from the nitrate of silver. The strength of the solution should be two grains to eight ounces of distilled water. To employ this properly, the following directions should be attended to: During the forty-eight successive hours, twelve injections should be thus used: let the patient place himself on the edge of a bed or chair, and having previously charged a glass syringe with the solution of nitrate of silver, let him hold it perpendicularly, introducing it perfectly parallel with the urethra; if he now gently push on the injection, the fluid will easily enter the urethra, and come in contact with every portion of the canal; no pressure is required on the perineum, as the force employed is not likely to push the fluid far into the canal. As to its reaching the bladder, and the danger that attends it, I can assure my readers this is chimerical, as any one must be convinced who has ever attempted to inject the bladder; to effect that, a catheter must be employed, and a strong syringe. Even supposing the solution to reach the bladder, the smallest quantity of urine will decompose the nitrate of silver. I have seen, purposely, not only injections, but the solid stick of nitrate of silver, introduced into the bladder without any ill consequences following.

A glass syringe is recommended, and we should be careful to tell the patient that a pewter instrument decomposes the salt, and renders it less efficacious. Should we inform him that the solution is one of those preparations which act on pewter, he would refuse to employ it, on the score that, if the solution acted on metal, it would, as a necessary consequence, injure the urethra.

The liquid should be injected cold, and a common-sized syringe, only half filled, will be sufficient, as the urethra does not hold more than that quantity.

Soon after the injections have been employed, there will appear a reddish-looking discharge. This should not prevent the patient from continuing the twelve injections, at intervals of four hours, notwithstanding any slight pain which may occur. A slightly purulent, rosy

discharge, is a very favorable sign, as it shows that the disease will rapidly yield.

We have dwelt at some length on the cases for which injections are suited—on the period, the strength, and manner of employing them—because we have the firm conviction that they have not been hitherto correctly appreciated ; they have been either too freely praised, or too absolutely rejected, without sufficient trials.

Various other injections have been recommended, and Mr. Carmichael, particularly, some years ago, proposed another method, which differs materially from the one we have just spoken of. He advised that injections of nitrate of silver, containing ten grains to the ounce of water, should be used. He purposely caused an inflammation, to destroy the special catarrhal one, and stated that gonorrhœa might be cured by this means. He further treated the inflammation of the urethra which he had occasioned, by antiphlogistic means, and on the disappearance of the inflammation he states both complaints were cured.

M. Ricord, in speaking of the merits of this treatment, says that such means will cure a great number of cases, but the surgeon plays a game of double or quits : if the disease be not cured, its violence is increased in a relative proportion, which is not unattended with danger ; hence, he has long since desisted from employing injections in the acute cases of gonorrhœa.

With respect to the method of employing injections, we can personally speak of their great advantage, having seen them employed in a great number of cases during the last three years, and *in no one case* have we seen either stricture or swelled testicle follow their employment in the treatment of the affection at its commencement.

This, however, we are well aware, is not the general belief. Injections are, in the opinion of some of the great surgeons, very injurious ; they are the source of the complications which occur after gonorrhœa. In reference, then, to such objections, I shall say a few words, not that I suppose they relate to the special treatment here recommended, but to the use of injections generally.

In tracing back the history of injections, we shall find that, by a very singular coincidence, they were first generally employed a short time before the investigation into the causes of stricture took place ; hence it naturally resulted, that, as injections were then in vogue, the cause of stricture was assigned to their use, as hardly a case occurred in which an injection had not been employed. This was rendered more probable by the astringent property of the injected liquid.

Surgeons seemed to be contented with this explanation, and hence may be the prejudices which exist at the present time. But we would ask any reflecting person—because an injection has been used previous to the occurrence of a stricture, is it to be considered as a cause, any more than than the cubeb powder? Are we justified in saying, *post hoc, propter hoc?* We answer, positively, no. In a great number of cases of stricture which we have examined, no injections have ever been employed. In a great many others, injections have been used, it is true; but are we surprised that in an affection such as a gleet of two years' standing, every remedy has been in turn employed to no effect? Would it not, then, be more consistent to consider that the organic changes which produce stricture are occasioned by the long duration of a chronic inflammation, which, from positive evidence, we know to be capable of producing induration and hypertrophy of all the tissues in which it occurs, rather than to believe the very problematic one that the use of injections occasions them? Let us ask any one of our opponents, what proof have they that injections produce stricture? The only reply they can give is, that they have followed the employment of injections; ergo, they are caused by injections. Such a line of reasoning is not allowed in other branches of pathology; we hope, therefore, the same strictness of language will be held here, and that the urethra will no longer be allowed to form an exception to pathological laws, or remain the field of ignorant charlatans.

Our reasons for entertaining the opinion that undue blame has been thrown upon injections, are the following:—

1. No one can doubt but that strictures arise where no injections have been used.
2. In cases where they have been employed during (we may with safety say) the first month of a maiden gonorrhœa, no stricture has been found to follow.
3. In the chronic cases of gonorrhœa which have lasted months and even years, and where injections have been employed in vain, strictures will follow, not in proportion to the injections, but as a consequence of the chronic inflammation which has been allowed to exist.
4. Instead of causing strictures, we believe, and hope to prove, in speaking of that subject, that the proper use of injections will remove one of the forms which depends upon a softening and hypertrophy of the mucous membrane.
5. From the beneficial effects which follow the employment of

nitrate of silver in checking inflammation of the conjunctiva or of the prepuce, we believe that this substance will have the same effect on the urethra, and, by curing inflammation, check one of the most frequent causes of stricture.

In these observations, we allude of course to the employment of injections in proper cases, and with judgment; for in the hands of quacks, they, like any of our most valuable remedies, may produce great mischief, but the blame must be thrown on the abuse, and not on the use, of the preparation.

On a late occasion, M. Ricord stated that he looked forward to the time when the action of nitrate of silver will be better known: from good effects to be derived from it in cases of balanitis and vaginitis, he should be disposed to employ the solid substance in the abortive treatment of gonorrhœa; but in hospital practice patients do not present themselves early enough, and in private practice a surgeon risks too much to commence such a treatment, particularly as the patient derives so much benefit from injections.

Treatment of the Acute Stage of Gonorrhœa.—Occasionally, in spite of our treatment, or in the case of a patient demanding our assistance at a period too late for us to entertain the idea of cutting short the complaint, the inflammatory stage will set in.

In such instances, the treatment must be guided by general principles, and consist in a severe antiphlogistic regimen. The practice which we have seen the most effectual, is, to apply twenty-five leeches to the perineum; the daily use of a warm bath; to prescribe diuretics, as well as large quantities of mucilaginous drinks, and to recommend the use of a suspensory bandage. The employment of a bougie or any instrument must be strictly forbidden.

Chordee.—By the foregoing means we shall relieve the most urgent symptoms; but we must not stop here—we must attend particularly to the erections, and treat the chordee. With this object in view, the patient should be enjoined to keep quiet, and avoid female society; let him lie on a straw or hair mattress, and not indulge in feather-beds or much bed-clothing; cold lotions to the penis are of advantage, and if chordee occur, the patient should put his feet on the cold floor. However, our greatest dependance should be placed upon camphor; it is one of the most powerful sedatives with which we are acquainted. In enemata, camphor may be beneficially administered in doses of from ten to twelve grains, mixed with the yolk of an egg, a grain of opium, and about four ounces of water. When lavements are given, they should be prescribed an hour before going

to bed, when they most probably will be retained. Camphor is, at the Venereal hospital, often administered in the form of pills, made of—camphor, 3 grs., opium, $\frac{1}{2}$ gr., mucilage, q. s. Two such pills may be taken before bedtime, and the dose increased until the desired effect is produced.

Retention of Urine.—The next symptom which the surgeon has to treat, is the retention of urine which sometimes occurs. The antiphlogistic means above recommended are usually sufficient to remedy the evil—not, however, always. Of course we should attempt to distinguish a retention of urine from a non-secretion of that liquid, as well as from dysuria. In the latter case, repose and a simple mucilaginous drink will suffice; diuretics should never be employed, and warm baths have likewise the effect of increasing the mischief, by causing a further swelling of the mucous membrane. In the case of retention of urine, which may last a few minutes, and is occasioned by spasm, warm poultices applied to the hypogastric region usually produce relief; there is no occasion to employ a catheter, as it only aggravates the complaint.

When the retention of urine has lasted many hours, and the means you have used are ineffectual, recourse must be had to the catheter, if the bladder be distended, but it must be introduced with great caution. If the instrument has passed freely, it should be withdrawn; on the contrary, if any obstacle has been overcome, the catheter should be left in the bladder, and fixed in the usual way, and the surgeon must continue the antiphlogistic treatment.

Abscess.—In cases where abscesses of the urethra, prostate, or frænum, take place, they must be opened upon their first appearance, or a fistulous opening will occur should they burst.

When an abscess forms in or about the prostate, the diagnosis is often difficult; but as there is dysuria, a sound being introduced may cause the abscess to open internally; however, the surgeon can not calculate on this, and therefore an external opening should be made as soon as the presence of fluctuation is perceived.

Hæmorrhage.—Another complication of the acute stage of gonorrhœa, which the practitioner is called upon to treat, is, hæmorrhage from the urethra. It is not very common, but we have observed some few cases of it. The causes we have previously stated to be the rupture of a chordæ, or else the act of coition during the inflammatory stage.

In such cases, repose in a horizontal posture generally suffices, at the same time that, by mucilaginous drink, the urine is rendered wa-

ter, taking all the precautions to avoid erections by the means described, and administering iced drinks. Our sheet anchor, however, is a cold lavement, and a horizontal posture upon a straw matrass ; excessive cold is prejudicial, as the urine is passed with difficulty. If, in spite of these measures, the haemorrhage do not cease, compression must be had recourse to by means of a towel twisted up and placed under the perineum, or, again, direct pressure may be made on the urethra. These, however, are but temporary means ; for, as the coagula form, the stream of urine washes them away.

Notwithstanding these circumstances, this species of pressure usually suffices. M. Ricord states he has found it of great advantage lately in the case of a young man who, in bathing, ruptured the urethra. The severe haemorrhage which followed was checked by compression, and it was not necessary to have recourse to any other treatment. All cases are not to be thus treated ; simple compression may fail in checking haemorrhage. The only means which are left for the surgeon is, to introduce a catheter of a moderate size, with great care, otherwise a false passage will be made. The simple introduction will usually suffice to check the bleeding ; or compression, by means of straps of plaster, may be added. By such means the surgeon is sure to check haemorrhage ; but he must carefully watch the case, as, from the altered volume of the penis in a quiescent state and in erection, gangrene may come on, and sloughing succeed, as happened in a case of the kind we are describing, at the Venereal hospital, some years ago.

Inflammation of the Neck of the Bladder.—The next complication to which we shall now call the attention of our readers, is inflammation of the neck of the bladder, or, according to the classification of Bell, his fourth phase of gonorrhœa. The symptoms are—tenesmus, a frequent and earnest desire to make water, and great pain attends the passing the last few drops, which are mixed occasionally with blood or pus.

The treatment must consist in antiphlogistic means, together with enemata, composed of four ounces of infusion of poppies with twenty drops of laudanum. *Inflammation of the bladder* may become a complication of gonorrhœa, and produce all the usual symptoms of cætrrh of that organ ; but it would be here out of place to enter into further details. We must refer our readers to the works of surgical writers.

Chancre.—With respect to the treatment of chancre in the urethra, it will in no way modify the treatment of acute gonorrhœa ; when

that is passed, it must be treated as chancres usually are. To avoid repetition, we must refer our readers to the chapter on chancre.

Buboes.—The treatment of buboes is very simple, as they do not depend upon a specific cause ; they very readily disappear under the use of antiphlogistic means, such as leeches and poultices. It is a circumstance worth noting here, that sympathetic buboes occur when gonorrhœa is in the acute stage ; on the contrary, when they arise as a consequence of a chancre in the urethra, and are therefore virulent, they commence at a late period, when the chancre is getting well. But on this subject we refer our readers to the subject of virulent buboes.

Among the complications of gonorrhœa in the male, perhaps one of the most important is that affection known by the term swelled testicle. I shall consequently devote the following section to its consideration, believing that it has not received that attention from pathologists or surgeons which it deserves.

SECTION III.

EPIDIDYMITIS.

Synonymous Terms.—In the older writers we find the term *hernia humoralis* frequently made use of. Astruc, in 1740, wrote on “*De Tumore Testium Venerea, sive Hernia Venerea.*” Hunter, in 1784, employed the term “swelled testicle.” B. Bell, in 1793, treats of the affection under the chapter “*Of Swelling in the Testicle.*” Swediaur, in 1809, speaks of “*tumeur des testicules.*” Sir Astley Cooper, in 1830, described the affection, terming it “*acute inflammation of the testis, or testitis.*” M. Lagneau, in 1831, heads his chapter, “*Testicule Venerien.*” Mr. Wallace, in 1833, writes on the “*disease of the testicles*” (complication of catarrhal syphilis). Sir B. Brodie, in 1833, calls it “*acute inflammation of the testicle,*” but tolerates the term *hernia humoralis*. In 1836, M. Desruelles described the affection under the term “*orchite aigue.*” In 1836, M. Rochoux first called the disease “*vaginalite.*” M. Velpeau, in 1839, calls it “*orchite.*” M. Ricord, in 1839, has denominated it “*épididymite blennorrhagique.*”

Symptoms and Course of simple uncomplicated Cases.—During the existence of gonorrhœa, it not unfrequently happens that a patient who is observant of his complaint, feels a pain in the perineum, accompanied or preceded by a dull aching sensation in the groin, and along the course of the spermatic chord, ultimately becoming fixed in the back part of the scrotum, and he can often cover the painful part with his finger. He remarks that the gonorrhœal discharge is somewhat diminished. When subject to nocturnal emissions, such a patient will feel great pain for some hours afterward ; but at this stage his linen presents no marks of blood ; the seminal discharge appears natural. When the surgeon sees the patient at this early stage, the finger detects a distinct swelling confined to the epididymis, which is sometimes hard and painful on pressure ; there is little or no redness of the scrotum, and the spermatic chord is often free from any thickening, although usually the vas deferens can be felt more distinctly than in the healthy state, and a feeling of pain is expressed when pressure is made in its course. In such a case, if proper treatment and rest be enjoined, the disease proceeds no further, and the patient rapidly recovers. As the surgeon rarely sees the case at this early period, if, from inattention to such slight inconvenience, the patient uses exercise, or goes about his ordinary occupations, the consequences soon become apparent ; the swelling in the scrotum increases, great pain is experienced on making the slightest movement, and the patient supports the testicle with his hand, so great is his fear of motion, which aggravates the pain in the course of the chord. At this stage he is often awoke by great augmentation of pain from nocturnal emissions, and he is surprised at seeing his linen stained with semen mixed with blood. There is, however, occasionally some alleviation to the suffering after an emission.

M. Ricord states that he has seen pus intimately mixed with the seminal fluid. I have witnessed considerable augmentation of suffering to the dull aching pain in the perineum when the patient goes to stool. A careful examination of the scrotum, at this stage of the affection, will show that there is not alone redness of the skin with great augmentation of heat, but that effusion has taken place into the tunica vaginalis. If the surgeon, with the left hand, embrace firmly the affected half of the scrotum, so as to render tense the testicle covered by its envelopes, and, with the fore-finger of the right hand, gently but suddenly press on the centre, a distinct feeling of fluid will be experienced, and the elastic body of the testicle will be felt below it. Should a lancet be thrust into this point where fluctuation exists,

a clear or slightly turbid serum, varying in quantity, will often escape, and the size of the tumor will sensibly diminish. When the fluid thus contained in the tunica vaginalis has escaped, the greater portion of the remaining swelling is found to depend on the epididymis, which is hard and painful, and can be felt distinct from the testicle; this appears to constitute the disease, at least in the majority of the cases. Effusion may not be confined to the tunica vaginalis; we often see the subcutaneous cellular tissue infiltrated with serum, and become œdematosus or phlegmonous; inflammation may result, and distinct abscesses form. However, when intense suffering has preceded, and the fluid has been allowed to escape, the testicle may be found hard, having lost its proper elastic feel, and it seems to form a nodulated body which we are unable to distinguish from the epididymis.

The general or constitutional symptoms at the commencement are slight, but in the stages of the complaint last described they may be very severe, and have been occasionally confounded with hernia.* A furred tongue, hard pulse, pain in the abdomen, vomiting, constipation, &c., are all met with in the severer forms.

Pathological Anatomy.—Patients laboring under this affection rarely die, as will be presently seen; but it occasionally happens that surgeons have an opportunity of observing the conditions to which the coverings and parts of the testicle are reduced by the disease, when a patient has been carried off by some affection of a more fatal kind. I cite below two instances of this disease where patients laboring under the complaint died—one in consequence of typhus fever, the other from an acute inflammation of the brain; and I may add, that all the cases observed since, by various persons, have confirmed the view here taken of the pathology. In a simple case which M. Ricord presented to the Academy of Medicine in Paris, the epididymis was affected alone. In another case, where severer symptoms had been observed, the tunica vaginalis presented traces of pus and false membrane. In the most severe forms, plastic lymph was effused among the seminiferous vessels. Mons. Gaussaile, late interne of M. Cullerier, at the Hôpital du Midi, has given the two following cases, which are to be found in the 27th volume of the *Archives de Médecine*, for October, 1831, p. 189.

Case 1. The epididymis was double the usual size, and hard. The testis of the same side presented twice its ordinary volume; this, however, was found to depend in great part upon an accumulation of

* See Potts's works, and case, page 83, occurring when the testicle was confined in the inguinal ring.

a thick turbid serum, somewhat bloody, which flowed out when the tunica vaginalis was opened ; the size of the testis immediately subsided. The tunica albuginea seemed thicker than usual ; its surface presented a large number of minute vessels spreading themselves out in various directions on its surface. The substance of the testis presented no appreciable change ; its consistence was somewhat firmer than usual, and the color deeper.

Case 2. The vesiculae seminales larger than usual, and firmer to the finger ; on the left side they were much injected, and of a dark-red color, containing a large quantity of a yellowish-white substance, which was somewhat granular. Both the vasa deferentia presented similar traces of inflammation, and were filled with this same matter. The epididymis of either side was voluminous ; the surface resembled the color of lees of wine, but this discoloration did not extend to the testis. The testicles had their ordinary volume ; some vessels were observed ramifying on their surface. A small quantity of reddish serum was found in the tunica vaginalis.

Causes of the Affection.—These may be of two kinds—the predisposing, or direct and exciting causes.

Predisposing Causes.—Under this head may be included fatigue, violent exercise, repeated sexual intercourse, and any circumstance producing excitement of the organs : authors have mentioned particularly excitement of the animal passions. Daily observation shows that various trades predispose to the affection ; we meet with it much more frequently among weavers, turners, grooms, and those whose testes are liable to friction. Among other predisposing causes, I should mention an habitual flaccid condition of the scrotum ; for it is a point on which any one may convince himself, that a strong cremaster and firm scrotum is rarely met with in individuals suffering under this affection. This is corroborated by the fact that the left testis is more frequently affected by the disease than the right, which is sustained by the seam of the trowsers affording it an adventitious support. Wet, damp weather, seems to act in the same manner in predisposing to the affection, and may afford an explanation of the epidemic nature of the complaint at some seasons of the year. Such are the principal predisposing causes of the affection.

The direct and exciting cause consists in inflammation of the urethra. Observation shows that this may take place by direct continuation of the inflammation along the vesiculae seminales and vas deferens to the epididymis ; or, it would appear, by virtue of a law common to many mucous surfaces, extremities of canals may become sympa-

thetically affected, the intervening surface not perceptibly participating in the inflammation. Of the fact there can be no doubt, that the epididymis is often affected, the chord remaining perfectly free from disease.

This cause, viz., inflammation of the canal of the urethra, however, seems to act in a manner that, *a priori*, we should not expect; for the epididymis is rarely affected during the first week, or during the period that the inflammation is most acute; from the third, fourth, and fifth week, this affection is most frequently met with. I take the following account from some statistical tables made by Mr. Gaussail: during the first week, three cases; second week, four cases; third week, five cases; fourth week, sixteen cases; fifth and sixth weeks, thirty-nine cases; two months, two cases; three months, one case. Now, as in the first fortnight the inflammation, although very severe, has not reached the deeper portions of the canal, being confined usually to the corpus spongiosum, it is probable that this is the reason why, at the early periods of the affection, the epididymis escapes. Such a supposition, however, is of some practical utility, for, if true, it leads to the practice of attempting to prevent the occurrence of the affection of the testicle, by putting a stop, by all active means in our power, to the inflammation before it has reached the prostatic portion of the canal; it may induce, moreover, the surgeon to inform the patient who consults him about the fifth week, that an affection of the scrotum is imminent.

Complications of the Affection.—The extension of the disease from the epididymis has been above spoken of, and I here collect the complications together in the order of their relative frequency. The epididymis may be primarily or alone affected; then the chord becomes inflamed; next, the tunica vaginalis, giving rise to all the symptoms of acute hydrocele, which has been of late, in France, supposed to play so large a part in the affection I am now treating of. The next most frequent complication is œdema of the scrotum and chord. Lastly, the testicle may become implicated, causing the disease properly called orchitis or testitis.

Terminations of the Affection.—When the epididymis alone has been affected, provided the case is seen early and proper means are employed, that organ will speedily recover its normal structure and functions. It often happens, however, that a hard, nodulated mass remains, which resists all the usual methods of treatment, but which, in time, will become diminished in size, and the perfect function of the organ be recovered; however, for months after, great pain may

be felt during sexual intercourse, and relapses may recur as a consequence. The effusion into the tunica vaginalis may, in some few cases, distend it to such an extent that it will form a hydrocele requiring an operation ; in other cases, effusion of pus or coagulated lymph may take place, and induce all the consequences which follow such lesions ; these terminations are, however, rare. The cellular tissue of the scrotum may regain its former condition, or the inflammation may become phlegmonous and abscesses form, or induce a chronic thickening of the whole scrotum, which alters its appearance considerably. Lastly, the testicle may present the hard irregular mass above spoken of, and suppuration of it occur ; when the slough separates, the seminiferous vessels become unravelled, and appear as so many shreds at the opening ; and not unfrequently a fungous growth makes its appearance, a condition of the testicle which has been so ably described by Mr. Lawrence. Lastly, the disease may cause the development of, or occasion, any latent disposition to tubercular disease in the epididymis or testis ; and I have met with numerous malignant affections which the patients themselves attributed to an affection of the scrotum following gonorrhœa. Here, however, there must have been some previous predisposition in the constitution, which is thus fostered by the excitement produced by the disease in the epididymis.

Diagnosis.—It would require more space than I can devote to this section, to point out the means of diagnosis between this affection and all those diseases with which it may be confounded. For this information, I must refer my readers to works on surgery. The cases of difficulty which I have met with, have been under circumstances such as the following. A similar instance will be found in Potts's work on hydrocele :—

A young man, twenty-four years of age, was in the habit of amusing himself, while a boy, by pushing his testicles into the abdomen ; one day the left testis did not descend as usual. Two months previous to his admission, he contracted a gonorrhœa, which discharged profusely ; he continued, notwithstanding, his employment, that of a wheelwright—a business which requires great bodily exertion. In about a fortnight after, he felt a painful sensation in the left groin, or a colic, as he expressed himself, in the loins ; and this becoming worse, he entered the *Hôpital du Midi*, a month after the commencement of his complaint, suffering under great pain in the inguinal region of the left side, which was greatly inflamed, and pressure on this part produced that peculiar feeling, but in a greater degree, which is

excited when the testicle itself is compressed. On examining this patient, no testis was found on the left side of the scrotum ; but, on passing the finger into the left inguinal canal, a rounded body was distinctly felt, resembling the testis in shape, and the patient stated that he experienced a similar kind of pain as that felt when the testicle on the opposite side was squeezed. Notwithstanding the vomiting which existed—the constipation of some days' standing, pain referable to the abdomen, and a quick, hard pulse—the case was immediately considered to be the affection I am describing, varying only in the situation of the testicle within the canal. The treatment was such as I shall presently describe, and the patient did well, and left the hospital in a few weeks. I shall make no comments on this case—it speaks for itself ; and I believe there are few surgeons but would be able to distinguish these symptoms from hernia, although I do not know that the diagnosis, or rather the occasional complication, is mentioned, except in Mr. Potts's work on hydrocele, who states that this error was committed by a practitioner who sent for him to operate on a case of supposed hernia, which turned out to be one of *hernia humoralis*. Should, however, a strangulated hernia occur in combination with this affection, there might be some doubt, and the operation, if attempted, would be rendered difficult.

The diagnosis of affections of the different parts contained in the scrotum, which become successively diseased, next requires our attention, particularly as the complications above alluded to have not been noticed by English writers, or at least only hinted at. On the subject of tumefaction of the epididymis I shall not dwell, as from the time of Swediaur, in 1809, authors, with hardly an exception, have admitted that that organ participates the first in the affection. Thus, Sir A. Cooper says, in his valuable Treatise on the Testes, that a swelling of the epididymis is a third effect of inflammation. He further says, “ This portion of the epididymis (*globus major*) is more frequently diseased than any other part of the testis or epididymis.”

Sir B. Brodie, in his lectures,* says : “ It (swelling) generally begins in the epididymis, and then extends to the rest of the organ.”

On the diagnosis of effusion into the tunica vaginalis, I must beg to dwell at some length, for, although it is admitted by Sir A. Cooper to exist frequently, still I do not think sufficient attention has been paid to the subject by the profession, and, in fact, practitioners are seldom agreed upon its existence. Fluid, when effused in small quantity into the tunica vaginalis, can not be easily detected, and may

* Medical Gazette, vol. xiii., 1833-34, p. 219.

be mistaken for a swollen state of the testicle itself—a thing of every-day occurrence ; and this is a circumstance, I believe, which has induced English surgeons to speak of the affection as an acute inflammation of the testicle. My readers will therefore see, that the diagnosis of effusion into the sac, from inflammation of the testis itself, is not a mere quarrel about terms, or one of those fine-drawn diagnostic distinctions, but is a matter of great importance. When fluid is present in the tunica vaginalis, the surgeon may satisfy himself of its existence in any of the following ways. I copy M. Velpeau's plan of detecting it, from the French dictionary :—

" If a considerable collection of fluid exist, there will be a transparent state of the tunica vaginalis as late as the eighth day ; should it be turbid, or the tunic thickened, the next best means is to seize the testis at its root between the two fingers ; the thumbs should then be pressed on the two extremities of its anterior part, and the following sensations will be experienced : the sudden pressure will produce the sensation of a layer of fluid which sinks into a cavity, but is soon checked by a more firm and regular surface ; the other finger will feel, at the same moment, an undulation which raises it." When the serosity is abundant, it will often be detected by its transparency. But perhaps the simplest way is to puncture it with a lancet, an operation attended with no danger ; the escape of the fluid, though productive of no very good effect (except in cases where the tunic is very much distended), has never been, in a great number of cases that I have seen so treated by M. Ricord, attended with any accident.

Swelling of the testicle may, as Sir B. Brodie states, be usually supposed to exist, from the severe pain felt by the patient when the glandular structure of the testicle becomes inflamed within the cavity of the fibrous, unyielding *tunica albuginea* ; such a rational diagnosis, however, has not been considered sufficient by the surgeons above quoted. Having punctured the tunic, and allowed the serosity to escape, they then feel for the testicle, which, if inflamed, has, from reasons above stated, lost its peculiar elastic feel, and may be felt hard and inelastic, either partially or generally.

On the diagnosis of effusion into the cellular tissue of the scrotum, I must beg to say a few words. Cœdema may follow as a consequence of various affections. I have lately seen a case of eczema of the scrotum, with great œdematosus swelling of the subcutaneous cellular tissue, and so hard that it required some time before I could decide if the testis was free from disease ; rest, cleanliness, and

proper treatment, however, enabled me to clear up this point. I mention the case, as its nature was mistaken.

One word more, and I have done with the subject of diagnosis. The œdematous swelling of the scrotum, when attended with phlegmon, may bring on abscess ; it becomes very important to open such abscesses early, and their diagnosis deserves some consideration.

The characters of such an abscess are the following : The skin becomes adherent to some part of the epididymis or testes ; an indurated circle is formed around it ; in its centre a distinct fluctuation may be felt, and this point is covered by the distended skin, which is of a darker color than that of the surrounding parts. In fine, the bistoury should never be used unless these signs are present, otherwise we may run the risk of wounding the testicle, mistaking its elastic feel for matter supposed to be contained in an abscess.

Prognosis.—That this is favorable, the preceding pages will, I think, attest ; consequently there is no occasion for my dwelling more upon it. But it will be necessary to say a few words on the probability of the occurrence of the complications, or of the speedy termination of the complaint. Seen at an early period, particularly when there is no swelling of the chord, the surgeon may usually assure his patient that the disease will be speedily relieved. If the gonorrhœal discharge be slight, or very severe, provided the patient takes no care, the same chance exists of the occurrence of the affection, or a return of it. I may here state, that a virulent or mild gonorrhœa seems to influence little the prognosis ; this, as previously shown, will depend upon other circumstances. The chance of suppuration of the testicle taking place is very slight, unless the treatment be very injudicious. The effusion into the tunica vaginalis will, as Sir Astley Cooper has so justly observed, be speedily absorbed, and seldom degenerates into chronic hydrocele, or requires more than palliative treatment.

The patient is often anxious to learn if the testicle will recover its proper functions, and the assurance that this will occur, and that atrophy of that organ is not probable, will give him a degree of confidence not experienced except in cases of this affection where pathology shows that the most important part, the testis, usually escapes altogether. However, the surgeon should inform him that induration of the epididymis may remain for some months.

When nocturnal pollutions occur mixed with blood, the same consolatory prognosis can not be held out ; and when there is a scrofu-

lous tendency in the patient's constitution, the surgeon should take care how he holds forth sanguine expectations of a permanent or speedy recovery, otherwise his treatment may be blamed, and his prognosis found to be incorrect. Let him in such a case share the responsibility with another.

The Treatment.—As every surgeon should have in view the prevention of the disease, the indications for effecting this must necessarily follow from a consideration of the causes which have been shown above to produce it. I may mention, that a speedy cure of the gonorrhœa, previous to the third or fourth week, and the employment of a suspensory bandage, are the most effectual means of preventing this complaint, and they should never be omitted. When the disease has become developed, either in consequence of neglect or inattention on the part of the patient, or from recourse not being had to surgical advice, the following means will be found the most effectual in preventing its further extension, and relieving the complications which have occurred. Rest in the horizontal position is among the first and most efficient remedies : merely keeping at home is insufficient ; repose on a bed or sofa becomes indispensable ; and the other means I am about to mention will afford little benefit, if the patient can not lay up for a few days. In the acute form of the complaint, when there is great constitutional disturbance, abstraction of blood from the arm will often be called for, followed by a local application of leeches. On this subject I must beg to say a few words : leeches should, as a general rule, never be applied on surfaces which have a substratum of loose cellular tissue, such as the scrotum, eyelids, vulva, &c. I can recal to my recollection various instances of the very worst effects—such as erysipelas, œdema, ulcerations, and gangrene, following the application of them to these surfaces. It is true, that in nine out of ten cases these consequences may not happen, but the careful surgeon should avoid even these exceptional ones, particularly when he is aware that all the good effects, without the ill consequences, will follow their application on the groins or perinæum ; and let not the practitioner be thrifty of them—a few often do more harm than good in acute inflammation, and the patient does not save either time or expense. Patients, as Sir Astley Cooper has so well remarked, are often, from their social position, unable to apply leeches, or they may be procured with difficulty. Under such circumstances, the surgeon may with a lancet puncture the scrotal veins, and withdraw the requisite quantity of blood, the patient standing before him ; cold and the recumbent posture will immediately check

the bleeding. On the subject of local applications, the feelings of the patient may be consulted ; cold washes, or warm poultices, may be prescribed. I need not say that aperient medicine must be given in cases of constipation, and a strict antiphlogistic regimen recommended. The employment of the tartar emetic in nauseating doses is undoubtedly of benefit in lowering the circulation, but alone it should not be relied on. In twenty-four hours the acute symptoms will usually have passed away, if the epididymis alone be affected ; and it is then necessary to employ compression of the affected part, in the manner I shall presently describe. The surgeon may now turn his attention to the cure of the gonorrhœa by the ordinary means, which it is not my intention here to enumerate ; in doing this, the cause being removed, the effect will speedily disappear, and not be liable to return.

When the acute stage is complicated with considerable and rapid distension of the tunica vaginalis, occasioning much pain, great relief will be instantly given by puncturing that membrane. I have likewise seen this symptom quickly relieved by the application of a blister which embraces the half of the scrotum, after the previous antiphlogistic treatment has been had recourse to. When the chord is much swollen, poultices and frictions must be persevered in for a long time, and compression should never be recommended.

In cases of abscess, I need not state that they should be opened as early as possible.

Method of employing Compression.—Compression is made on the testis by means of strips of plaster. The *emplastrum vigo cum mercurio*, of the French codex, is the preparation that M. Ricord employs, cut into strips about half an inch wide ; but other adhesive plasters answer equally well ; the less irritating they are, however, the better.

The manner of employing them is as follows : embrace the affected testicle in your closed hand, drawing it, at the same time, away from the other ; then pass a strip of plaster around the chord, just where it is in connexion with the testicle, to prevent the testicle escaping out of the scrotum ; this being done, the scrotum of the affected side will be adapted closely to the testicle, which presents an oval shape ; the strips of plaster may then be applied in circular layers along the testicle, until all but the lower part is included ; the latter may then be compressed by smaller and shorter strips, placed at right angles with the circular ones, which they thus maintain in their place. The testicle is thus equally compressed, and the strips

of plaster should be drawn tolerably tight. The patient will usually complain of some degree of pain during and immediately after the operation ; far from discouraging the surgeon, this should lead him to believe that the compression is well applied. When, however, the pain has not abated at the end of an hour, the surgeon may usually be assured that no good can result from this treatment ; the compression should be discontinued, and antiphlogistic means had recourse to. If the cases of compression be well selected, and the indications followed, it will be necessary to withdraw the plaster in a few hours after, for the size of the testicle will have subsided considerably, and the shell of adhesive plaster will become quite lax ; it must be removed, and other strips applied in the same manner as the former, which may require removal in succession. I have witnessed cases cured in twelve hours by these means, both in the hospital of *La Charité*, and in the *Hôpital du Midi* ; and I can most confidently recommend it in the subacute stages of inflammation, and in the sympathetic affections of the epididymis.

It is, however, very prejudicial in all cases where inflammation is gaining ground, or when it has already become very severe ; it is useless when there is great effusion into the tunica vaginalis, pressure then having but a slight effect on the epididymis. When, however, the fluid has escaped, compression becomes a very valuable adjunct ; it should never be employed when the chord is affected with acute inflammation, as we are unable, from its position, to compress it completely ; and I may here repeat, that there is no means so useless or prejudicial as inefficient or unequal pressure. If the strips be not reapplied when they become loose, a reaction will take place which it becomes very difficult to counteract ; therefore the period of reapplication should be carefully watched. The surgeon should be aware that this treatment, like many others, may be abused ; and I may mention, that gangrene of the scrotum has come on from the non-observance of the above rules. I have, however, never observed any ill consequences follow the judicious employment of compression, notwithstanding I have seen it used in two hundred cases. I may be expected to say a few words on the supposed *modus operandi* of compression ; although, for the practical surgeon, it is sufficient to know that it is beneficial, and in what cases it should be employed. Compression here, as in many other cases, has been supposed to act by retarding arterial action, and not permitting so much blood to come to the part ; support, it is said, is given to the veins, and if inflammation depend upon or be followed by an enlarged

state of the vessels, it is not surprising that compression should be of benefit. Pressure, moreover, not only is stated to prevent the further deposition of fluids and solids among the tissues, but it is supposed to excite absorption of such matters as are effused and not yet become organized. Whatever view we may take of the subject, no difference of opinion, I repeat, can exist on the benefit to be derived from the treatment which I hope I have dwelt sufficiently long upon to induce English surgeons to practise it.

The annexed engraving will better explain the manner of employing compression. Fig. 1 shows the strips of plaster passed around the chord and testicle; figs. 2 and 3, the strips placed at right angles, to maintain the circular ones, and compress the lower part of the swelling.



Chronic Stage of Gonorrhœa.—I shall now, having treated of the most important complications of gonorrhœa, in pursuance of the order laid down, return to the consideration of the treatment of the *chronic stage of gonorrhœa*.

It has been above stated, that this period is easily recognised by the absence of pain in making water. Chordee may, however, still exist.

At this stage we should employ the same means as recommended for the abortive treatment of it; thus, the use of warm baths, which were strongly recommended in speaking of the treatment of the acute

stage, must now be entirely laid aside. The patient should be put on a mild but nutritious diet, prudence being observed as to quantity, and care being taken that no excess of any kind follow. The most perfect tranquillity of the genital organs should be observed. The surgeon must likewise employ cubebs and copaiba in the proper doses, which alone will, in a variety of cases, suffice to cure this chronic stage. The same rules, in the administration of these two substances, must be followed as were laid down in a previous section.

Although M. Ricord is fully persuaded that gonorrhœa may be cured by these means, still he recommends them to be combined with a direct local treatment, or, in other words, to employ injections in the way we have detailed already, preferring, above all others, those containing the nitrate of silver; not, however, as M. Carmichael recommends, in the proportion of twelve grains to the ounce, but in the more modest proportion of a quarter of a grain to the ounce of distilled water. Whatever results follow, and even in spite of an increased discharge, or a secretion tinged with blood, we recommend that, during the following two days, six injections be employed daily; stop at the end of that time the injections, but continue the cubebs, &c. The aggravation of local symptoms, which the injection has occasioned, will soon pass off, and, usually speaking, the discharge will altogether cease. A relapse, however, often follows any excess in diet, &c.; in such a case, we must repeat the injections with the same restrictions, and continue the general treatment some time. M. Ricord usually prescribes the cubebs during the following nine days, gradually diminishing the dose.

During the succeeding three weeks, neither baths, wine, nor women, must be indulged in; after that time, the patient may gradually return to his usual habits. It occasionally happens that the injections of nitrate of silver do not produce a sanguinolent discharge, and the running continues in spite of this treatment; the surgeon, finding this to be the case, should enjoin his patient to recommence the twelve injections, increasing the strength of the solution to the amount of one, two, or three grains to the ounce, and so on progressively, until the usual effects are produced.

When the discharge is of very old standing, it may be necessary likewise to continue daily the injections for some time, particularly if under their use the muco-purulent discharge gradually ceases; but as soon as such an effect is produced, it will be well to leave off the injections instantly, as their employment would only tend to recall the running. The object the surgeon should have in view is thus

usually obtained, and, guided by these principles, he will generally succeed.

In some few cases, injections with nitrate of silver fail of their desired effect; we may then replace them by others, containing sulphate of zinc, in the proportion of six grains to $\frac{3}{4}$ j. of water, combined with a few drops of laudanum.

In spite of this treatment, or in consequence of its not being followed up, a *gleet* will remain. The discharge appears only in the morning, gluing together the lips of the meatus. It is generally considered of little consequence, still it annoys some patients very greatly. For its cure, we should employ injections composed in the following way: from one to six grains of tannin to an ounce of red wine from the south of France; to this may be added from one to six grains of alum.

There are some cases which resist the means of cure above spoken of, and then the surgeon should have recourse to the cauterization with the solid nitrate of silver. Many patients dislike the employment of instruments; we therefore should not cauterize, until we find that other means have failed. I have seen the instrument of M. Lallemand* usually employed for this purpose at the *Hôpital du Midi*. It is introduced as far as the neck of the bladder; by means of a little spring, the cup containing the nitrate of silver is caused to project, and the *porte caustique* gradually withdrawn, which slightly cauterizes the sides of the canal. I can hardly suppose, however, with Whately, that the salt only affects the diseased portions of membrane; every part, sound or diseased, is equally cauterized. This, however, is of no great inconvenience. At the time of the operation, the patient suffers considerably in the canal, the secretion becomes augmented, and a scalding is felt in making water. As this usually follows, the patient should, after the cauterization has been performed, be told to expect such consequences; otherwise he will become alarmed when he perceives the discharge tinged with blood. In about three days the discharge will cease, and then the surgeon may prescribe, with advantage, cubebs; or, if at the end of five days the secretion from the urethra continues as before the cauterization, the surgeon will do well to repeat it, and again, on the subsidence of local irritation, let him employ general treatment.

In practice, it will be found that cases exist which do not get well even under the preceding treatment, and yet no perceptible organic

* An engraving of this instrument will be given when describing the subject of cauterization.

change of the mucous membrane exists which can account for it. We have seen great benefit derived, in these cases, from injections of the proto-ioduret of iron, in the proportion of one grain to the ounce of water, and augmented until the injection contains twenty-four grains to the ounce. The strength should be increased very gradually, as the preparations of iron and iodine are very liable to change, in consequence of decompositions easily taking place. If, under weak injections, the *statu quo* remains, the surgeon should augment the proportion of the proto-ioduret ; on the contrary, should the employment of it be followed by a sanguinolent discharge, it may be laid aside, and general treatment employed ; and if in a few days the discharge cease, no further treatment is required ; if this does not happen, the surgeon should repeat the injections, taking care to increase their strength.

Another plan of treatment which I have seen crowned with the most signal success, consists in the employment of a dry *tent* composed of linen.

In speaking of balanitis, I have stated the great advantage to be derived from a piece of dry lint placed between the glans and prepuce ; for it seems a law of the animal economy, that the contact of one inflamed surface with another aggravates the original affection, and tends to keep up diseased action. From the observation of these facts, M. Ricord was induced to try if he could not treat gonorrhœa in the same way as balanitis ; he was more inclined to think such a treatment beneficial, as, in the case of blennorrhagia of the vulva, a cure rapidly followed the introduction of pieces of lint between the nymphæ. In cases, therefore, which resisted ordinary treatment, M. Ricord determined upon introducing a tent into the canal, and observing the result. The method is very simple, the materials consisting merely of a piece of linen seven or eight inches long, a stilet, and a gum-elastic catheter open at both extremities. The tent is attached slightly to the stilet, and placed in the gum-elastic catheter, which the surgeon introduces, as far as he thinks necessary, by means of the stilet ; the strip of linen is kept in its place, while the catheter is gradually withdrawn ; and, lastly, the stilet having served the purpose of fixing the linen, may itself be withdrawn. Thus the linen separates the sides of the canal, which it effects very well until the patient makes water ; it should then be replaced. Such treatment is only applicable when the urethra is not irritable, and it can not be employed previous to the subsidence of the inflammatory symptoms, as the frequent introduction of the catheter would aggravate the inflam-

mation. I have had occasion to see this treatment employed in early and recent cases of gonorrhœa with considerable success. Still it can not be recommended in the early stages, for reasons stated above ; but in chronic gonorrhœa, where other means fail, the surgeon should have always recourse to it. No pain at a late stage attends its introduction ; still, as patients have naturally a great dread of instruments, we should delay its use till other means have been ineffectually tried.

Latterly, long cylindrical bags, composed of the *baudruche* of Ducamp, have been recommended by M. Crespiat, which are introduced by means of a stilet, and are then filled with air or fluid. They act on the principle mentioned above. In chronic gonorrhœa, great benefit will often attend the introduction of a bougie or sound, although no stricture may exist. They are often useful, as they at once check the discharge ; or, in other cases, their employment will have the effect of first increasing, and then gradually diminishing, the running. Instruments thus introduced may be smeared with various ointments, such as one composed of nitrate of silver, one grain to the ounce of lard, or blue ointment may be preferred. When the frequent introduction of a bougie is attended with much pain, the surgeon may think it proper to leave a catheter in the bladder ; and in some instances the gleet will not yield unless this be done. The diet, in such cases, must be nutritious and strengthening, accompanied with cold baths in summer, and revulsive remedies, particularly blisters, on the inner part of the thigh, or on the perinæum. Instead of persisting with cubebs and copaiba, their use should be discontinued, and vegetable or mineral tonics given liberally.

In some cases, sea-bathing and change of air will alone effect what the surgeon has been unable to accomplish. One of the conditions of success seems to be, in some cases, the attempt to convert the chronic into an acute stage. If all these means fail, let the surgeon send his patient into the country, and allow him to amuse himself ; but, above all things, to forget that he is laboring under a gleet.

SECTION IV.

STRICTURES.

ONE of the most frequent consequences of chronic gonorrhœa is stricture, to the consideration of which subject we now call the reader's particular attention.

Definition.—Sir B. Brodie, in his Practical Observations on Diseases of the Urinary Organs, thus defines stricture : “ A mechanical obstruction to the flow of urine through the male urethra.”

In the following pages I shall consider the term stricture as a diminution of the natural calibre of the urethra.

Classification.—Authors who have written on the subject of strictures, differ among themselves on the classification of this disease. Sir B. Brodie, who is so justly considered an authority, speaks in his work of two kinds—*spasmodic* and *permanent stricture*.

Sir A. Cooper, in his lectures, says : “ Strictures of the urethra are of three kinds—the *permanent*, the *spasmodic*, and the *inflammatory*.”

My own observations lead me to believe that this last classification is the most correct, and it is the one I shall follow in this chapter.

SPASMODIC STRICTURE.—The case described by Sir B. Brodie, at page 3 of his valuable work, will give a good idea of the disease : “ A man who is otherwise healthy, voids his urine one day in a full stream. On the following day, perhaps, he is exposed to cold and damp ; or he dines out, and forgets, amid the company of his friends, the quantity of champagne, or punch, or other liquor containing a combination of alcohol, with a vegetable acid, which he drinks. On the next morning he finds himself unable to void his urine. If you send him to bed, apply warmth, and give him Dover’s powder, it is not improbable that in the course of a few hours the urine will begin to flow. After the lapse of a few more hours, you give him a draught of infusion of senna and sulphate of magnesia, and when this has acted on the bowels, he makes water in a full stream.”

After such an able description, it would be of little use to allude further to a simple case ; but it sometimes happens that the spasm is aggravated by other causes, and the retention increases to a great

extent before the surgeon is sent for. I therefore shall allude more at length to the affection. It is rarely met with except in young persons, or those of irritable habit; although it may become a complication, as we shall presently see, still it seldom affects elderly persons.

The *causes* have already been sufficiently alluded to, namely, cold, damp, excesses in liquor; but these will only act in certain constitutions.

The frequency of the attack will also vary much, as Sir B. Brodie observes, much probably depending upon the patient's constitution, but much also on his mode of life. One person may suffer once in six months, while another may be affected in the same way every week or fortnight. The situation of this form of stricture, nearly all authors are agreed upon, is at the membranous portion of the urethra, and is generally attributed to a spasmodic action of Wilson's muscles.

The Symptoms.—I can not do better than state these in Sir B. Brodie's own words. At page 12 he says: "The symptoms of retention are formidable enough, and not the less so, as they generally attack the patient suddenly. He is, perhaps, sitting with his friends after dinner, and feels an inclination to make water; in attempting to do so, however, he is disappointed. A second and a third attempt is made at different intervals, and all without success. Now, however, the case assumes a more serious aspect. There is an indescribable uneasiness felt in the region of the bladder; the efforts to void the urine are no longer voluntary—the patient is forced to strain, and the whole of the abdominal muscles are seen in convulsive action, instinctively endeavoring to unload the bladder of its contents. This viscus may be felt hard and large above the pubes. The heart soon begins to sympathize with the local irritation; the pulse is hard and strong, the face flushed, the skin hot, and the tongue covered with white fur. Perhaps the violent efforts of the patient may force out a few drops of urine, and thus afford him some relief; but the kidneys go on secreting, and the relief is only temporary. In the great majority of cases the spasm is spontaneously or artificially relieved; but there are, nevertheless, numerous examples of the contrary, in which the retention terminates even in death. The bladder itself may be ruptured at the fundus, the urine escaping into the surrounding cellular membrane, and into the abdomen."

The *diagnosis* of a spasmodic stricture is derived from the possibility of passing the urine at one time of the day and not the other;

from the suddenness of the attack, not preceded by the symptoms we shall presently see attend the other forms of stricture ; and, lastly, by the introduction of a bougie.

The *prognosis* is not unfavorable, provided a surgeon is called early ; but at a later period it is somewhat more severe, though by no means very serious. The patient should, however, be told that these attacks, if they become frequent, are liable to lapse into other forms of stricture, and the prognosis will be considered under those divisions.

The *treatment* of a simple case has already been alluded to ; when this fails, or the surgeon is called at a late period, Sir B. Brodie recommends the following : Believing the cause of retention to be local, he would reject the warm bath and bleeding, and recommends the use of the smallest gum-catheter, which has been kept for a considerable time on a curved iron wire. It should be introduced without the wire, and as it approaches the stricture, turn the concavity of the catheter toward the pubes, elongating the penis, at the same time drawing it out as much as possible. If this fails, Sir B. Brodie recommends us to try a catgut bougie, which, failing in passing, should be pressed against the stricture, and when *the patient makes an effort to pass water, should be suddenly withdrawn* ; this will often be successful. These means failing, it may be possible to introduce a silver catheter, or an elastic gum catheter mounted on a firm iron stilet, into the bladder.

Recourse may be then had to opium in drachm doses, in the form of clyster, or it may be given by the mouth every hour until the patient can make water.

Sir B. Brodie states he can place no dependance upon the warm bath in comparison with opium. Neither has general bleeding appeared to him of much benefit, though he has seen good results from cupping in the perinæum. In the early periods, he considers the use of purgatives beneficial. Sir Benjamin terminates the treatment by citing a case of intermitting retention cured by sulphate of quinine.

Inflammatory Stricture.—This form of stricture has not been alluded to by Sir B. Brodie. A description of it will, however, be found in Sir Astley Cooper's Surgical Lectures.

It may exist alone, or in combination with the other forms. Not unfrequently in acute gonorrhœa I have met with complete retention, in consequence of inflammatory swelling of the mucous membrane ; and Sir Astley states it may follow the introduction of a bougie. I

have, however, witnessed the affection most frequently coming on in consequence of the use of instruments in cases of spasmoid stricture, and I believe that this latter affection is very frequently complicated with an inflammatory stricture. A permanent stricture, which is pervious sufficiently to allow the passage of a small bougie, will often, in consequence of the use of instruments, cause complete retention of urine from inflammation. I have witnessed the same effects from caustic bougies; hence its study becomes of great importance to the surgeon, and deserves greater consideration, not, perhaps, as a separate affection, but as a complication, than previous writers have given it.

The *treatment* that I have seen employed with the greatest success, is that recommended by Sir A. Cooper, and usually adopted by M. Ricord; that is to say, general bleeding when the symptoms run high, purgatives, leeches to the perineum, and the warm bath. Much to my surprise, however, certain modern surgeons recommend, even in these cases, the use of the catheter, and assure us that they attempt to pass catheters in *every case of retention of urine*. When the heads of the profession speak thus confidently, it is perhaps improper that I should recommend a contrary practice. Notwithstanding, I have seen so much mischief follow, that I would not recommend the use of the instrument in *inflammatory stricture*, or any stricture complicated with inflammation, be it spasmoid or permanent.

PERMANENT STRICTURE may depend upon an organic alteration of the canal of the urethra, or of the surrounding tissues or parts. Let us then consider what is the nature of these organic changes of the canal.

They may be twofold, depending either upon an alteration of the *surface* of the mucous membrane, or on an alteration in the *thickness* of its parieties.

1st Variety. *Alteration of the Surface*.—Various forms of ulcers, with their edges more or less elevated, and a surface presenting a fungous appearance, may be the cause of stricture, as Brunner and Mery have long since stated.

In certain cases the calibre of the urethra is diminished by vegetations, as Hunter, Bell, and Baillie, have admitted. These vegetations may occupy any part of the canal. I have subjoined a drawing, which was taken from a patient in the Venereal hospital during the last winter, representing a vegetation seated immediately within the fossa navicularis. This is a common situation for vegetations, particularly in the female. M. Ricord states that he found also vegeta-

tions, not only in the membranous, but likewise on the prostatic portion of the urethra, in the same subject.

Laennec mentions cases where he observed false membranes attached to the mucous membrane of the urethra, thus producing stricture. M. Ricord, in citing these observations, says he has never met with similar cases, but in no way doubts the possibility of their occurrence.

In addition to the lesions of surface above described, I must mention cicatrices, which may be either the result of ulcers of various kinds, and seated at various points of the canal, or may follow rupture of the canal, as happens in cases of chordee, or from tearing of the parts with instruments, accidents, &c. Gangrene may produce a loss of substance, and the part, in cicatrizing, may not only diminish the calibre, but likewise shorten the urethra, or produce on its surface bands, or bridles, which may more or less alter the dimensions of the canal. Let it be remembered that cicatrices are permanent alterations, and that when once formed they have no tendency to diminish. *(yet they contract)*

Sæmmering and other authors have spoken of a hæmorrhoidal state of the posterior part of the canal. This often depends upon an impeded circulation of the part. In such cases, bleeding often occurs under slight causes, as on the introduction of an instrument, or even after voiding the urine.

2d Variety. *Alteration in the thickness of the Tissues or Substance of the Mucous Membrane.*—It has been stated that acute or chronic inflammation often produces a swelling of the mucous membrane, and this frequently becomes a cause of stricture; but as inflammation lingers longer, and is most severe, in the deeper portions of the canal, this variety occurs most frequently in these situations. The swelling does not always present the same conditions; it may be either circumscribed or diffused—may occupy only a point, or the whole circumference of the canal, and, as in all other tissues, be accompanied with softening or induration of the membrane. A fungous degeneration is sometimes a consequence, and not unfrequently a callous thickening of the parts takes place, which bears a strong analogy to cartilage. *Balh!*

There is, however, another alteration in the canal, which theories at one time or another in vogue have prevented surgeons from paying that attention to which it deserves. I refer to that form of induration which elsewhere I have called specific, and which accompanies chancre in the urethra, as well as in other parts. These indurations,

which constitute the greater portion of obstinate strictures we are called upon to treat, are seated in the spongy portion, and resist usually the local treatment, or even become aggravated by mechanical means, whereas they disappear very rapidly under general treatment. Cancer, scrofula, &c., may give rise to swelling of the urethra, and thus produce stricture.

3d Variety. It has been stated that permanent stricture of the urethra may depend upon *affections of the parts around the canal*. The most common among these are various inflammations of the cellular tissue, which, terminating by suppuration, occasion a loss of substance, and, in healing, produce cicatrices, or leave indurations which produce deviations of the canal, and diminish its calibre. In addition, it is found that the prostate, or any one of its lobes, may become enlarged; and it is the universal belief, since the days of Sir E. Home, that stricture in the deeper portions of the canal depends upon this cause, or an abscess in the neighborhood. It is easy to conceive how any substance which can act on the outside of the canal, or become lodged in its cavity, will be, to a certain extent, a cause of stricture. In fine, any of the morbid states above described may exist alone, or they may become combined, and thus give rise to stricture.

Causes.—Although gonorrhœa is a very frequent cause of stricture, still other affections may give rise to the permanent form. M. Ricord cites the case of a young man, twenty-five years of age, who had been subject to difficulty in passing water from his infancy, although he had never had a discharge from the urethra, nor was there any foreign body present in the bladder to account for it. This young man, when he entered the hospital, labored under stricture of the urethra, and a most attentive examination failed in recognising any alteration of form in the prostate gland.

But if other causes *may* occasion stricture of the urethra, it can not be doubted but that venereal disease, and particularly gonorrhœa, most frequently produces it.

Nothing is more common, says M. Ricord, than to meet with a difficulty in voiding the urine, amounting even to retention, in the acute stage of gonorrhœa, even at its commencement, to which the name of inflammatory stricture has been given. Such strictures are the result of phlegmonous swelling, or of an œdematosus infiltration into the sub-mucous cellular tissue, and they disappear when the acute stage has passed away; but it is not uncommon to see this

state prolonged, or pass on to a chronic form, together with the inflammation which has given rise to it.

Such strictures are usually of considerable extent, and are frequently situated near the bulb, at its anterior part, and the nearer the orifice of the canal according to the duration of the complaint. The extent and severity of strictures depend upon the number and duration of gonorrhœas. This is of great importance, as it proves that the use of injections has been too often condemned without sufficient reason. It has, I hope, become clear to my readers, that injections, under the proper restrictions (which I have alluded to elsewhere), as they tend to check inflammations, so must they prevent one of the most powerful causes of strictures ; and as astringents, under certain circumstances, tend to remove the soft hypertrophy of mucous membranes, so they may be said to cure, rather than give rise to stricture. But I must here quit the subject of injections. When popular errors are to be combated, I am always glad to cite the opinions of those who are so deservedly respected in the profession, and on the present occasion I can not help quoting a phrase of Sir B. Brodie. That gentleman, at page 9, says : " Permanent stricture frequently follows an obstinate gonorrhœa. Astringent injections have been sometimes considered to be causes of this disease ; but I certainly believe that more blame has been attached to them than they really merit. It is the abuse, and not the use of injections, which is to be deprecated. I have no hesitation in saying, that there is greater danger as to the production of stricture from a very long-continued gonorrhœa or gleet, than from the prudent use of a mild astringent injection."

The *situation of stricture* is various, but it is found most frequently at the membranous part, and at the bulbous portion. It has been stated, that when several strictures exist, one is always found in this situation. There are exceptions to this rule, and M. Ricord says he is astonished at finding that Mr. Civiale has only met with two such cases.

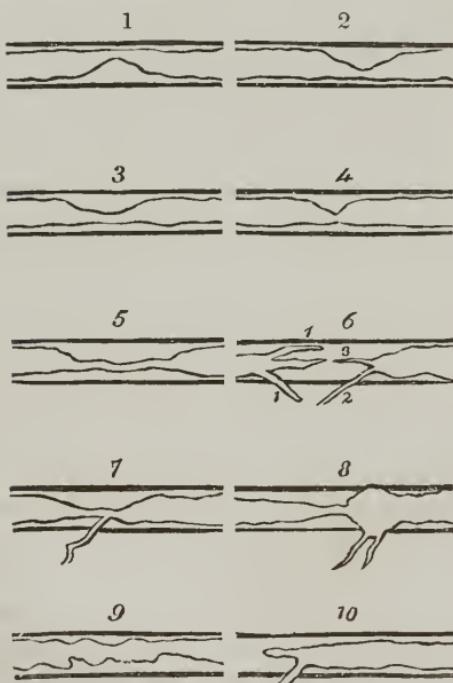
Hunter and Sœmmering state they have never met with cases of stricture of the prostatic portion of the urethra. M. Ricord, however, has seen this part of the urethra narrowed, independently of the prostate. Mr. Crosse cites a similar case.

The *number of strictures* may be various ; one only may be present. Ducamp affirms that one, or at most two, is the usual number. In this respect, adds M. Ricord, Ducamp is correct. Nevertheless, Hunter states he has met with six strictures in the same patient. M. Lallemand of Montpellier has seen seven, and Calot eight. About

three years ago a patient was admitted at the *Hôpital du Midi*, whose urethra was strictured in its whole extent ; there were ten fistulous openings, the most anterior of which was seated on the side of the frænum ; the others were situated along the spongy portion of the canal as far as the bulb.

The *form of stricture* may likewise differ—namely, it may consist simply in a little band, or septum, stretched across the canal : this is called by Sir A. Cooper the riband stricture ; a part or side of the canal may alone be affected. In cases of callous stricture the induction may occupy the whole circumference of the canal, or a part only, as may be proved by the *porte empreinte* of Ducamp. The stricture, again, may be confined to a small part of the circumference of the canal, or it may occupy an inch of its extent : this, by Sir A. Cooper, is styled the corded stricture.

The different forms of stricture are shown in the annexed figures.



A—The cut edges of the corpus spongiosum.

B—The urethra.

C—The stricture.

The Symptoms of Permanent Stricture.—In consequence of inattention or ignorance, a person may for a long time be subject to stricture without paying any regard to it. However, he usually perceives that his water passes with difficulty ; the stream of urine, which at first was diminished in size, becomes gradually smaller, until it comes away drop by drop, trickling and dribbling down, and staining the

trowsers of the patient; in the street an experienced eye detects at once the individual who is laboring under a strictured urethra. Patients suffering from stricture, when they consult a surgeon, tell him that the urine passes in a corkscrew fashion.

These symptoms are not exclusively those of stricture, as I shall now attempt to prove. A sluggish bladder will cause the urine to dribble, as it were, and fall on the shoes of the patient; and, on the appearance of this symptom alone, the surgeon would be rash to come to a conclusion that a stricture existed. The same effect will be likewise produced when the penis possesses an unusual degree of contractility, or when it is in a state of erection.

The spiral or corkscrew stream, as seen in the annexed figures,



may be produced either by a stricture, or by the relative position of the canal to the opening of the meatus. The canal being circular, and the meatus linear, if the bladder does not act with its accustomed vigor, the difference in the direction of these two portions of the canal may give the stream of urine a spiral form.

The cause of the urine being spirted up is sometimes owing to the opening being high up; and in such cases, if the bladder act vigorously, the stream of urine will be propelled upward instead of directly forward. The same effect is produced by an enlargement of the middle lobe of the prostate. Another symptom of stricture has been drawn from the modification in the emission of semen. Thus, during the act of coition, the patient feels that an emission of semen is taking place, but none passes out by the meatus, when, afterward, that secretion is seen oozing out by degrees.

These modifications in passing urine, or in ejaculation, may be accompanied with pain, or swelling of the penis, and the application of the finger detects a hardness at some particular point; often the patient contracts the habit of drawing out the penis, and the practitioner might imagine he suffered under calculus, were not the other symptoms of that affection wanting. Thus, in stricture, the penis is longer than usual. Chordee is likewise often present, and the organ

may be drawn in erection downward, upward, or laterally ; of course this chordee is to be explained by a lesser degree of elasticity of the corpus spongiosum, as compared with the corpora cavernosa, in consequence of the deposition of plastic lymph within its cellules.

Another very frequent symptom of stricture is a discharge from the urethra, which we call gleet, and which the French designate by the term *suintement*. This gleet may sometimes be the only symptom present ; it may consist in a mucous or purulent discharge, or the only trace of it is to be found in a thready secretion which resembles vermicelli. Slight as this sign is, it very often annoys patients, particularly hypochondriacs, who find, by reading books, that M. Amusat considers it a symptom of stricture, although no other is present. Thus they collect their urine in a glass every morning, and examine it most minutely, to see if any appearances exist ; if they find a shred, they are miserable during the next week.

When it is stated that a gleet is a symptom which often attends stricture, we are perhaps wrong, as the two affections depend upon one and the same cause, namely, chronic inflammation of the mucous membrane. But although in such a case it can not be said that stricture gives rise to a gleet, as gleet and stricture often occur simultaneously, and the gleet is thus only a continuation of the gonorrhœa, still there is frequently a form of gleet which depends on and is occasioned by stricture, as I shall now attempt to prove.

If, as in the above case, a gleet may precede or arise simultaneously with a stricture, it is no less true that it often follows as a direct consequence, and is one of the symptoms of it, as above stated ; and, moreover, it is impossible to cure the gleet without removing its cause, namely, the stricture.*

Daily observation shows that, when a stricture exists to some extent, the stream of urine is necessarily checked at the back of the stricture ; irritation succeeds, speedily followed by inflammation, or, if it previously existed, the inflammation becomes aggravated ; the urine reacts on the inflamed membrane, which often becomes softened, and a secretion arises as a direct consequence of the strictured canal. It is in such cases that I regard the stricture as the cause of the gleet, although, as I observed above, a gleet may exist independ-

* I find that Whatcly, in his Treatise on the Urethra, is of opinion that the gleet proceeds from that portion of the mucous membrane in front of the stricture. Sir B. Brodie, in his valuable Lectures on Strictures, is of the same opinion. May we not, then, believe that in such cases the gleet is the consequence of the gonorrhœa, and not of the stricture ?—a point of practical, and not of mere theoretical importance, as will be shown.

ently, may be produced by the same cause, and, lastly, be dependant upon a stricture. Hence the practical advice given by M. Ricord in his *Clinique*, to pass an instrument in old-standing gleet ; otherwise, after using injections, your patient, on consulting a brother practitioner, may lay at your door the stricture. If, on sounding him and finding a stricture, you inform him of it, your character is saved.

In addition to the inconvenience above stated, a gleet gives rise to other consequences ; thus, if the canal be much diminished in calibre, the discharge will, by plugging up the passage, occasion a complete retention, particularly when the bladder acts feebly ; if it does not plug up the passage, the tenacious secretion may adhere to the sides of the canal, and cause the patient to make water in a spiral manner.

The adhesion of these shreds of mucus to the walls of the canal might, in a case of simple gleet, by causing the patient to make water in a spiral stream, lead a surgeon to suppose that a stricture really exists. But, even without passing a bougie, he may always suspect this cause, if the patient state that the stream of urine is only altered from time to time. Should it, however, be permanent, he must attribute it to inequalities of the canal ; in fact, to organic change.*

A sluggish bladder will produce the same effect ; but this cause will be at once recognised, if, when that organ has nearly emptied itself, the stream becomes natural.

The preceding observations may show how guarded we should be in giving an opinion on the existence of a stricture simply from the signs above enumerated, as they can not be depended upon, although of value when associated with others. And have not authors been wrong in considering these as pathonomic ?

Fortunately for the surgeon, he has other means of determining whether a stricture really exist or not.

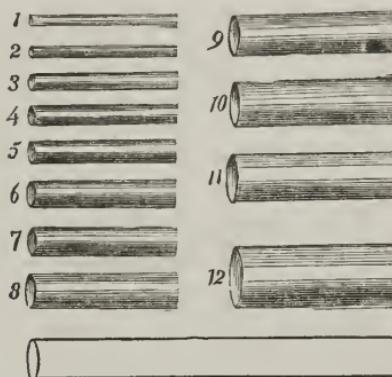
This he ascertains directly by exploring the canal, from before backward, by the aid of various instruments, composed of metal, or of elastic and pliable substances, and called bougies, which may be either solid or hollow. Their shape is likewise different ; they may be either straight or curved.

Their volume, like their shape, differs materially ; they may be cylindrical, or conical, or *à ventre* : by this term I mean that one portion of their circumference may be larger than the rest.†

* I would ask if such cases have not sometimes been called spasmotic strictures ?

† It may be supposed that this means of exploration gives us at once unequivocal signs of stricture. Such is the case when an instrument introduced into the urethra be-

The different sizes and the different forms of bougies are seen in the annexed and following cuts.



Not content with the exploration of the canal from before backward, some surgeons have proposed to detect strictures by means of an exploration from behind forward. For this purpose M. Amussat has invented an instrument which, when introduced into the urethra by means of a spring, causes a button at its farther extremity to protrude ; the instrument is then gradually withdrawn, and by this means M. Amussat considers that he is able to detect strictures which are not recognisable by other means. That such is the case, there is no doubt ; as, for instance, in those diaphragmatic or valvular strictures above spoken of. But, observes M. Ricord, in one of his clinical lectures, it is not of such absolute necessity to treat them ; they are permanent, and provided they do not interfere with the functions of the canal, or by their presence occasion disease of the neighboring parts, they should be left alone, for you do no good by removing them, if their presence only gives rise to some change in the stream of urine ; whereas, by irritating the canal in their removal, you only stimulate and produce probably further mischief. Modern practitioners have, however, not been content with simply knowing that a comes firmly embraced by the stricture ; any one having once felt this sensation can never mistake it. But, as is usually the case in medicine, if this be easy, there are other cases in which the diagnosis becomes very difficult. I have above stated that a spasmodic stricture may occur, and prevent the passage of the instrument ; in other cases, it will be impossible to pass a small bougie, whereas a large one enters without difficulty. A curved instrument sometimes passes where a straight one will not. A soft instrument may likewise bend upon itself, and thus produce the sensation as if a stricture existed, and the surgeon is not a little surprised, after gradual pressure, to see the extremity of his bougie reappearing at the meatus. It hence results, that, with the exception of the first instance, it is often difficult to convince oneself of a stricture, and the surgeon may be often led into error. The preceding observations also show how necessary it is to employ various instruments before coming to a decision.

stricture exists, and seeking out every little irregularity which may be present on the surface of the mucous membrane, but they have devised means, by exploring the canal, to find the depth at which it is seated. But as the organ changes so much in length under moral impressions, and as measurements may be made either during traction or when the penis is hanging, no two medical men will be agreed on this subject, notwithstanding all that has lately been written upon the subject. The urethra has been farther explored by instruments for another purpose, viz., to know the exact position and direction, as well as tightness of a stricture. This is done by means of bougies, at the extremity of which is placed a piece of cobblers' wax, which takes the exact impression of the stricture. (See annexed cut.) But this may not altogether be a true one; frequently true impressions are given, but it often happens that the instrument is stopped where no stricture exists, and particularly at the bulb the wax will receive impression as of a stricture, although none really exist.

Diagnosis of Stricture.—The occurrence of the symptoms, either alone or in combination, together with the errors which the surgeon may fall into, have been sufficiently spoken of here; it is unnecessary to revert again to the symptoms by which a stricture may be detected.

But as there are various lesions which may give rise to the affection, it is to facilitate the differential diagnosis of these (in order that our prognosis and treatment may not be empirical), that I now demand the particular attention of my readers.

In respect to the differential diagnosis of *vegetations* or *excrescences* on the surface of the mucous membrane, I have stated, in speaking of their pathology, that they occur most frequently at the orifice of the urethra; thus, in stricture at this point, we may suspect them as the cause, although it must be allowed that this alone is of no great use. The introduction of a bougie detects an im-

pediment, but nevertheless passes without great difficulty, accompanied by a peculiar sensation, similar to that produced by an instrument thrust through the substance of the lung. Considerable haemorrhage follows the introduction of the instrument, although the bougie has not made a false passage, the bleeding being occasioned by the great vascularity of the vegetations.

Vegetations may be distinguished from a puffy or haemorrhoidal state of the mucous membrane, by the absence of that grating impression spoken of; in both cases haemorrhage takes place. It must still be allowed that the differential diagnosis between these two morbid states of the mucous membrane, however important, is difficult, and can only be made in some cases; of course these two states mutually accompany each other sometimes, and in such instances no positive conclusion can be arrived at.

The occurrence of strictures dependent upon *cicatrices* may generally be diagnosed (independently of the general signs common to all) by the bougie becoming firmly fixed in the stricture, which is with difficulty dilated, and no haemorrhage following. Lastly, the *porte empreinte* shows that the stricture is linear, not presenting that thickened state of the surrounding parts seen in the following form—that is to say, in the callous stricture. The same result is produced by the introduction of M. Amussat's instrument.

In strictures caused by a *callous state* of the mucous membrane and surrounding tissues, no bleeding will follow the introduction of a bougie, which becomes firmly held by the stricture; they yield, like the last, slowly to attempts at dilatation, and are usually situated deep in the canal, where chronic inflammation lingers the longest: thus we usually find them in front of the bulb, and the finger may often detect them in consequence of their extent and hardness. The *porte empreinte* further corroborates the diagnosis.

I can not here pass over in silence the differential diagnosis between indurated stricture, the result of a *simple* and that of a *specific inflammation*; for I have elsewhere wished to prove that the urethra is subject, like every other part of the body, to chancre and induration of a specific nature.

At an early period, however, our diagnosis can only be a rational one, derived from the history of the case, as in both species of stricture a discharge has been observed from the urethra; inoculation, however, will at this period decide the question. Called upon for an opinion at a later period, say two months, when all discharge has ceased, our diagnosis must be based upon the concomitant circum-

stances, namely, the occurrence of secondary symptoms, which seldom fail to appear, if the induration be of a specific nature. I have had several occasions of observing this at the Venereal hospital, and, as will hereafter be shown, treatment must be quite different as one or the other view of the subject is taken—namely, whether the induration be specific or not.

Prognosis of Stricture.—As regards the prognosis of stricture depending upon vegetations, we can not expect a speedy cure, as we are well aware how liable they are to be reproduced even when removed, and, being situated within the urethra, their removal often is very difficult. In respect to the softened puffy state of the mucous membrane, we can usually promise the patient a speedy and permanent cure. Perhaps, of all strictures occurring in the urethra, this is the most easily cured.

Stricture depending upon cicatrix renders a cure neither speedy nor permanent. The tendency all cicatrices have to contract, in consequence of the peculiar tissue of which they are formed, is well known; but we must remember that, as a cicatrix is a permanent lesion, we have to fear no augmentation of the stricture if left alone, provided it does not completely close the canal. Should it narrow the calibre of the urethra, we must give a very unfavorable prognosis, as most probably it will produce disease of the bladder and of the parts situated behind the stricture. Lastly, we can depend little upon destroying the cicatrices, as we only cause still greater ones to be formed.

Unfortunately, our prognosis of a callous stricture is very little more favorable than the last, unless we are called upon to treat it soon after its occurrence. When once organized, this cartilaginous mass closely resembles cicatrix; its elements, in fact, are the same, and it is a rebellious form of stricture. As regards specific induration, the local disease usually disappears under proper treatment; but as it shows that the system is under the influence of syphilis, the prognosis must be referred to that disease.

The *Treatment of Stricture* necessarily follows that of the prognosis, in the order of the description we have pointed out. It, however, by no means follows that strictures of the urethra should be considered as a morbid state, to which we are called upon to apply a treatment. We have before stated that stricture is, in some cases, a definite termination of an affection of the urethra, and bears the same relation to it as do cicatrices to ulcers, or union by the first intention to simple wounds. The urethra may be altered in direction, or even

its calibre diminished ; and provided no discharge follow, or any inconvenience in the functions of the neighboring parts (as, for instance, of the prostate, vesiculae seminales, bladder, &c.) succeed, the surgeon is not called upon to treat the case simply because the diameter of the canal is slightly diminished, or in consequence of the stream of urine becoming irregular ; for, under such circumstances, a treatment becomes only a source of irritation, instead of a means of relief. "I am well aware," states M. Ricord, in a note to the French edition of Hunter, "that strictures are often more quickly cured in proportion as they are early treated ; but this law, general as it is, does not the less admit of exceptions, particularly in that form of stricture which may be called definitive."

We may hence conclude that it is only in cases which have a tendency to increase, or which interfere with the direct functions of the urethra, and those of the surrounding organs, that we should submit our patient to treatment.

Many authors, and Hunter among the rest, are of opinion that local treatment is the only one required in cases of permanent stricture ; yet the more or less inflammation present, the strength or weakness of the patient, as well as various complications, may require other means than those demanded for the simple destruction of an obstacle in the canal. This is probably the case in that form of stricture which depends upon the specific induration of chancr, and which, usually refractory to a local treatment, yields to general means employed to cure the specific disease.

Hence, then, we must divide our treatment into general and local.

The *first* may be simple, directed only to combat the inflammatory state, as well as spasm and various complications which are present ; it may, moreover, be specific or special, and employed to destroy the peculiar cause of the disease, as in indurated chancr.

The *second* comprehends simple applications, as well as dilatation, cauterization, and scarification, or incision by the various instruments we shall hereafter describe. With respect to the treatment of stricture *by general means*, I shall only refer my readers to what I have previously said, in speaking of gonorrhœa and the treatment of chancr in the urethra, and shall, therefore, pass on immediately to the consideration of the *local treatment*.

Here the use of various applications generally considered as tending to the resolution of inflammation is often of great service, when applied externally, or introduced into the urethra. We find that by these means many forms of the induration left after inflammation

gradually disappear, and the cause of the stricture ceases under these simple local means.

In the same manner, injections into the urethra of various preparations will cure stricture which depends upon hypertrophy and softening of the mucous membrane. These preparations will have the same effect on the urethra as they have on the conjunctiva—that is, cause a rapid cure.

DILATATION.—It must be allowed, however, that the greatest number of strictures resist the means above spoken of, and the surgeon is then called upon to employ others of a more powerful nature. Among these I must first place dilatation.

Dilatation, in fact, is the plan of treatment the most generally applicable, and, whether employed either alone or in combination with other means, most frequently succeeds.

Dilatation has been employed, variously modified, by different surgeons in different countries ; but these modifications may be summed up in the following manner :—

1st. *It may be sudden.* (Dilatation brusque of M. Ricord.) This plan is particularly recommended and practised by M. Mayor. It consists in passing a large-sized metallic sound into the urethra ; and this treatment is founded on the principle, “that the tighter the stricture, the larger should be the bougie employed.”

The ingenious surgeon of Lausanne (says M. Ricord, in one of his clinical lectures), uses these large sounds on the principle that small ones are liable to make false passages, whereas large instruments only tend to dilate gradually the stricture ; and he further draws an analogy between the sound and the head of a child dilating the os uteri, considering that the mechanism of dilatation will be the same in both. It is unnecessary to show how erroneous this analogy is.

In appreciating this plan of treatment, M. Ricord has stated that, in principle, it is in some instances true that it is easy to pass a large sound when the stricture can not be penetrated by a small one. Thus, in cases of spasmodic stricture, a small bougie or silver catheter is immediately stopped, whereas a large one passes without difficulty ; in old people, where the mucous membrane of the canal is hypertrophied and softened, a small instrument often gets entangled, and can not be pushed forward without the danger of making a false passage, yet a full-sized instrument is admitted.

When a stricture depends upon a slight band or septum stretched across the canal, the introduction of a large instrument will often

break through it, whereas a small one will be prevented from passing ; but in this case the violence done to the canal may be followed by considerable reaction, and such cases would be far better treated by incision than thus roughly handled.

But if these large bougies are useful in some cases, they certainly are not in those where callous stricture is present, for here the surgeon runs the risk of rupturing the urethra, if he uses force ; and this actually happened in M. Mayor's practice.

I reject, then, the method as one of universal application, but nevertheless approve of it in some rare cases. I can not, however, quit M. Mayor, without mentioning to my readers a precept of that surgeon on the passing of instruments. Introduce them (says he) with gentleness, and when the point is in contact with the stricture, hold the instrument close to the meatus ; by this means you may exercise a much greater pressure on the face of the stricture, and the instrument is less likely to take a wrong direction. A parting objection to M. Mayor's plan is, that this dilatation, even when it succeeds, gives rise to symptoms of considerable reaction, and abscess of the perinæum frequently occurs.

2d. *Dilatation* may be employed *rapidly* in contradistinction to *slowly*. It consists in passing a small bougie without employing violence, and replacing it by another of a larger size every two or three hours, in proportion as the instrument ceases to be firmly grasped by the stricture. This plan of treatment has been particularly recommended by Lallemand of Montpellier, and Professor Velpeau of *La Charité*, although practitioners generally, and particularly Hunter, blamed it as prejudicial.

It is true that, by this means, the surgeon may cause a large-sized bougie, in a few hours, to pass through a stricture which a short time previously resisted a small instrument ; but there are many cases to which this treatment is not applicable, particularly when there is an irritable state of the urethra, as this successive introduction of bougies will augment and aggravate it. This is, however, only one of the objections against the treatment ; the most powerful is the liability of the disease to return, for it seems to be a law in the economy of stricture, that the relapses occur in proportion to the rapidity of the cure of the case. M. Ricord states that he has had under his care a patient suffering from stricture, which three months previously had been treated in this manner, and was supposed to be cured, yet a bougie of half a line in diameter passed with difficulty.

Such are the reasons, then for the rejection of this plan, and which

induce M. Ricord, in his private and public practice, to employ gradual dilatation.

3d. *Gradual Dilatation.*—This consists in passing small bougies (the size of which must depend at first upon the tightness of the stricture), and substituting successively larger ones, allowing sufficient time to elapse between each introduction, so that no irritation of the canal ensues ; should such arise, the employment of a larger instrument must be delayed until the irritation has subsided ; the surgeon may then proceed with the gradual dilatation, but, on the slightest return of inflammation, discontinue its employment. This line of treatment is slow, but it is very successful, and a cure seldom turns out fallacious.

It follows, then, that great advantage may be derived from dilatation employed alone ; still it is prejudicial in cases complicated with ulceration of the canal, as well as in those depending upon bands crossing the urethra, where it tends only to cause irritation. When vegetations are present, dilatation is of no benefit. They will often, likewise, prevent the passage of a bougie, and considerable haemorrhage will result if we persist in our endeavors. Dilatation, again, can not be relied upon in the callous stricture which is organized ; in place of giving relief, dilatation will have the effect of causing a local inflammation, and thus aggravate the case. When, however, dilatation is employed in callous strictures of a recent date, the greatest advantages may be expected from it ; but it is often difficult, *à priori*, to state whether the callous mass be organized or not. As, then, dilatation is apt to produce reaction in callous strictures of old standing, the surgeon must be often content when he is able to pass a bougie of two and a half lines in diameter, and not torment the canal further.

Another question arises : should dilatation be employed *temporarily* or *permanently*? Each mode of treatment has its objections as well as its advantages. The frequent passage of instruments is very liable to occasion an irritation of the strictured portion of the urethra. Leaving a bougie in the bladder often tends to produce an irritation of the neighboring organs, as, for instance, irritation of the prostate, bladder, &c. We should, however, prefer the use of temporary dilatation whenever the frequent introduction of instruments is not very difficult or painful, and when the bougie so introduced ceases to be firmly grasped by the stricture ; when, on successive days, it can be employed with facility, and when the bougie can be easily replaced by one of a larger calibre.

Under opposite circumstances, we should employ constant dilatation, by leaving a bougie permanently in the canal. Various authors have recommended that temporary dilatation should be employed for a longer or shorter time ; none, however, give any definite opinion. M. Ricord's treatment is the following : he recommends that a bougie be introduced which is of such a size that it becomes tightly grasped by the stricture, and he orders the patient to keep it in that position until it passes through the stricture easily : this usually soon happens ; it is then to be withdrawn, and the symptoms of reaction, if any occur, are allowed to pass off. On the following day the same bougie is introduced, and if it pass easily, the number which is a little larger is introduced, and the same directions given. Under this treatment I have seen a great number of strictures cured. Of course he does not insist on the application of this treatment to all cases of stricture.

When a surgeon wishes to keep a bougie permanently in the bladder, he may allow eight days to pass without changing the instrument, provided it does not get coated with sediment, and if no reaction takes place.

In a note on Hunter, M. Ricord observes : It is not only a swelled testicle, or a discharge from the urethra, that the leaving a bougie permanently in the urethra may occasion, but likewise many other inconveniences arise, which often oblige us to give up the treatment. Thus, as an immediate consequence, we may observe inflammation of the neck of the bladder, which produces frequent and ardent desire of making water, as well as tenesmus or incontinence of urine in various degrees, which will depend on a greater or less share of irritability, or, as more commonly happens, on weakness or debility of the muscular fibres of the bladder. The inflammation of the bladder itself is not an unfrequent consequence of the employment of instruments which are left in the urethra.

Under some circumstances, ulceration or perforation of the bladder follows, particularly in those cases where the instrument presses exclusively on any particular point. In addition, however, to these accidents, sympathetic phenomena occur of a purely nervous or sometimes febrile nature. Under the latter head we may enumerate, as the most common, accesses of fever, of a periodical or intermittent type, which occur or disappear according as the instrument is left in the bladder or withdrawn.

Thus employed, dilatation may act in one of three ways as a curative agent. Its beneficial influence may be exerted in the same way as compression is supposed to act. The introduction of a bougie will

mechanically empty the vessels of the engorged tissue ; it will likewise excite or stimulate the parts, and cause an absorption of the effused secretion. This is what M. Ricord calls the action of compression produced by dilatation.

The second mode in which dilatation may act, is by occasioning from the strictured surface a free purulent discharge, which will diminish the size of the swollen parts.

Dilatation may produce a third effect, namely, excite such a degree of inflammation or ulceration as will lead to the destruction of the stricture. There are surgeons who pretend that, unless bougies have produced this effect, the cure or amelioration they effect will be only temporary. Such, however, is a very erroneous opinion, for we must always bear in mind that ulceration will give rise to a cicatrized surface, which has a tendency to contract ; and dilatation employed so as to produce ulceration, instead of curing, will tend to aggravate the stricture.

M. Ricord states that the advantages of dilatation can only be obtained when it acts on the principle of compression, and such should be our object.

In order that dilatation be practicable, we have hitherto supposed that the instrument penetrates the constricted parts. This necessary condition is not always easy, or even possible to attain ; and in the impossibility of passing the instrument through the stricture, we derive great benefit from exercising a pressure by means of the extremity of the bougie upon its anterior part. M. Ricord states that, during the period he had the care of the diseases of the urinary organs at the *Hôtel Dieu*, M. Dupuytren treated many cases with great success, by introducing every day, with great care, an instrument, and gently pressing on the face of the stricture. He was contented with making slight progress daily, and ultimately the contracted point admitted the introduction of large instruments. It often requires six weeks to pass a stricture ; yet, if no reaction occurs, and you are successful enough to form a depression on the anterior part, a patient continuance of this treatment will soon get the better of these obstinate cases. Whatever be the theory that the surgeon may adopt, adds M. Ricord, it is an incontestable fact, that, without having previously passed the stricture, he may observe, under the influence of this treatment, that the patient's evacuation of water, which at first was nearly impossible, becomes easy and re-established by degrees, and the symptoms of retention of urine, which were imminent, cease altogether, even before the instruments have reached the bladder.

Other plans of treatment have been recommended. Thus Ducamp proposed that a bougie, open at its two extremities, and of a considerable diameter, be passed till its farther progress was stopped by the stricture : through this first, which served simply as a conductor, a smaller instrument was introduced, which he considered would dilate effectually the strictured part.

Latterly, M. Béniqué has proposed an ingenious plan, which consists in introducing into the canal a bundle of small bougies made of catgut, and independent or unconnected one with the other, which the operator successively attempts to push through the stricture until one or the other enters. This idea, says M. Ricord, is pretty, but it has been recommended rather by a mathematician than by a practical man.

It may be asked, in employing dilatation, either permanently or temporarily, is it necessary that the bougie enter the bladder ?

When the stricture exists in the spongy part of the urethra, and the surgeon proposes to employ temporary dilatation, of course it is quite unnecessary to pass the bougie into the bladder ; when, on the contrary, the bougie is to remain, its point should be introduced into that cavity ; and, in order to prevent the occurrence of inflammation or irritation, a well-curved bougie should be employed—one which has been made purposely—as it retains its form better than instruments which have a curved direction given them simply, from containing a curved stilet.

At the present time, few authors are agreed upon the instruments by means of which dilatation should be performed ; and, as much diversity of opinion exists on the proper form, I shall here transcribe the opinion of M. Ricord, published in the notes of the French edition of Hunter's works.

“ Conical bougies produce the inconvenience of dilating the sound parts more than those which are diseased, and especially of fatiguing the meatus when they are of a large size. On the other hand, when they are inflexible or too stiff, they are the cause of false passages more than any others. But when the surgeon is called upon to treat a stricture which is tight, and which can only be passed by a small instrument, conical bougies, made of a supple material, are by far the best, and to be preferred to all we have previously alluded to, and so far favor the introduction, that they pass those strictures with ease which impede or render impossible the passage of cylindrical instruments of a smaller size. Conical bougies form more easily than others that infundibuliform impression on the face of the stricture, and

they insinuate themselves gradually into the strictured part, when gently directed and pushed ; besides, their use is accompanied with less suffering to the patient than that of cylindrical instruments of a similar size. To conclude, if my personal experience," continues M. Ricord, "in a large hospital had not taught me the immense importance that attaches itself to the employment of this shaped bougie, the opinion of Dupuytren would suffice to recommend it in opposition to those surgeons who pretend that the employment of conical bougies is now generally abandoned.

" Provided bougies are either cylindrical or conical, when they are of a certain calibre, it is impossible to prevent their fatiguing the sound parts of the canal, as I have before remarked, especially the meatus and that portion of the canal which corresponds to the *glans*. To obviate this inconvenience, surgeons have employed fusiform bougies, or, as they are called in France, *bougies à ventre*, and which Ducamp has especially recommended. These bougies have the undisputed advantage of only dilating the strictured portion. The principal objection that has been made to them, namely, that they pass with difficulty the meatus, and that they necessarily do violence to the points which they come in contact with, is untenable ; for the utmost volume of their enlarged portion ought only to have a diameter equal to that of the cylindrical bougies which the surgeon would employ in similar cases ; so that it will be at once seen, that it is preferable only to pass through the meatus and the other parts of the urethra, which we should spare as much as possible, with this dilated part, rather than allow an instrument of an equal volume throughout to remain permanently dilating the canal. I shall here say nothing of those conical bougies, to the extremity of which a small rounded point (boule) is attached ; they constitute a subtlety which sound practice knows how to reduce to its proper value."



(Conical bougie.) (Fusiform bougie.)

Surgeons generally employ flexible bougies—some practitioners prefer those made of wax ; if, however, these bougies have an advantage, when they are properly made, of receiving an impression of morbid lesions of the mucous membrane, or of moulding themselves to the natural or artificial curvatures of the canal, it still happens that, in employing them, the operator finds that they are either too firm for some patients, or else they do not offer sufficient resistance, when he is obliged to make several attempts before he succeeds in getting through the stricture, as they are liable to become soft from the heat of the parts.*

“ For my part,” says M. Ricord, “ I prefer gum-elastic bougies, although, latterly, practitioners have again introduced metallic instruments. I am well aware that their trifling weight adds nothing to the ordinary dilatation, as performed with milder and more easily-borne instruments ; but I would take care not to stigmatize, as some have done, with charlatanism, certain persons who recommend inflexible instruments as simple and economical in hospital practice, as patients can without danger employ them : a fact of some importance, when the case requires only occasional passing of instruments to maintain the cure.

“ Under the head of inflexible instruments, surgeons have classed some bougies which are not so in reality, or, at least, do not permanently remain so, as, for instance, those made of whalebone, which M. Lallemand, of Montpelier, praises so much, as also those formed of catgut, or even those more recently introduced ones of flexible ivory. These last, made from ivory which has been reduced to a demi-gelatinous state by depriving it of its phosphate of lime, have the advantage of furnishing a solid instrument which receives any desired curve, according to the case, and offers another advantage, that of becoming soft and swelling, in consequence of moisture, which, although it has a tendency to follow the direction of the canal, will be disposed likewise to dilate it. The objections, however, which have been urged against the whalebone bougies, apply equally to these. Their principal inconvenience depends upon the dilatation taking place in the strictured part, so that the instrument becomes fixed there, and adheres with so much force that it is not always easy to withdraw it, without employing such a force as might possibly tear

* I may mention that Sir B. Brodie prefers the wax bougie ; he states that this preference arises from a wax bougie retaining its bent form, whereas an elastic one has a tendency to regain its straight direction, and hence is not well constructed for being passed along the curved canal of the urethra.

the part, and is, therefore, not free from danger. Nevertheless, this objection may be, in some measure, obviated by previously soaking the instrument in water. We may thus derive great benefit from this invention, so happily introduced into France by M. Charriere.

After having employed dilatation, and succeeded in relieving the stricture, we should give directions to our patient to pass an instrument every fourth day during the following fortnight, and then once a week for some time; should a recurrence of the symptoms of stricture follow, or should the stream of urine diminish, it will be necessary to dilate the parts again, and wait to see if the cure be permanent.

We have hitherto spoken of dilatation as it may be very advantageously employed alone, and we have stated that there are various cases in which it is not only incapable of producing benefit, but tends to aggravate the complaint; it may frequently be combined with other plans, one of which I now propose speaking of, viz. :—

CAUTERIZATION.—Its employment is not of modern date. Alphonso Ferri is one of the early surgeons who employed it; and Ambrose Paré states that he obtained several remarkable cures by cauterization, previously to which he destroyed (*l'usure*) the hard carnosities. Loiseau, it is well known, cured Henry IV. by means of cauterization, although it was attended with accidents of such a severe nature that he was tried for his conduct.

Latterly, in France, it has been employed, in consequence of the eulogium passed on it by Ducamp, by Lallemand of Montpelier, Amussat, Segalas, and others. In England, in spite of the approbation of Hunter, Charles Bell, and Whately, it has fallen into disrepute; and this is not surprising, when a remedy like this has become the crotchet of certain individuals, who pretend that it is applicable to all cases and all stages of stricture. Unfortunately for patients, the two opposite doctrines prevail. One party will cite cases of failures, and necessarily disparage cauterization; the other will state that they have never met with cases which they were not enabled to cure: in the one and the other case, it is in vain to inquire in what forms of stricture this treatment was had recourse to: neither the indications nor contra-indications are even so much as alluded to by those who think fit to enlighten their professional brethren.

In order to assist my readers in a just appreciation of the treatment, I shall give such indications for its employment as will, I hope, convince the profession that the greatest advantage may be drawn from its use.

If the surgeon thinks that it is a line of treatment which, of itself, is applicable to all cases of stricture, without distinction, he will find it more frequently injurious than beneficial, for in a variety of circumstances he can very easily do without it ; but if it is employed with discretion, in cases which call for and are adapted to it, it becomes not only a means of cure in itself, but is likewise a very good adjuvant to dilatation.

It is under these circumstances that a spasmodic stricture yields to a superficial cauterization, employed, not for the purpose of destroying the tissues, but simply with the object of modifying their vitality. In the same manner, strictures, accompanied with ulcerations, or depending on granulations seated on ulcerating surfaces, or on fungous masses, or a softened hypertrophied state of the mucous membrane, or simple tumefaction of it, will be cured more rapidly and effectually by cauterization alone, or combined with dilatation, than by the latter treatment solely.

If, however, the caustic be employed to destroy cicatrices, which inevitably will be replaced by others of a still larger extent, or, if it be used in those hard, callous strictures in which resolution is impossible, far from ameliorating the state of the part, it will only aggravate it, and retard or prevent a cure, which other means, more adapted to the case, would most probably have brought about.

Hunter only recommended cauterization in cases where the surgeon is unable to pass the obstacle ; hence, according to his views, the caustic could only be applied on the face of the stricture. On the other hand, Ducamp and his school recommend the employment of the caustic only in those cases where the stricture is pervious, and thus allows the application of the substance to its parietes. Of these two methods, I prefer the latter, whenever it is practicable ; but I should previously dilate the stricture to a certain extent ; for, although the effect of caustic be that of destroying spasm, and although it may act as an antiphlogistic, it is no less certain that its application is sometimes followed by inflammation and swelling, or hæmorrhage even may result, and frequently a thick secretion will follow and give rise, like the eschars which it determines, to an obliteration of the strictured point. As these accidents are more or less severe, we should experience a difficulty in passing instruments. In a note upon this subject, M. Ricord states, that he thinks the following directions may be laid down upon the employment of caustic :—

1. The surgeon may feel himself called upon to cauterize directly from before backward (Hunter's plan), whenever the stricture allows

urine to pass, and yet offers a resistance to the introduction of instruments, however small, or however well directed.

2. The interior of the stricture should be cauterized wherever dilatation has been employed without success, when but little progress has been made, when inflammatory action comes on, or the case gets worse under our further endeavors to augment the dilatation.

M. Ricord is not in the habit of employing cauterization before a bougie of three lines in diameter passes, and hence people might be induced to think that when a bougie of this size passes, it is unnecessary to cauterize; but, as I have just observed, such is not the case, and practice contradicts the supposition. I have seen cases where a bougie of four lines in diameter passed, and yet suppuration continued, and it was only checked by one or two applications of nitrate of silver. It has been a favorite opinion, and one that has been much acted upon, that caustics are endowed with a species of intelligence, attacking only such parts as are the seat of the disease. This opinion is much exaggerated; still, from what we observe on the prepuce, when we cauterize vegetations, we can easily believe that, if a stricture depend on these substances, they act the part of a sponge sucking up freely the caustic; but, in cases where no vegetations are present, we do not believe that the sound parts will remain unaffected by the caustic.

Strictures may be cauterized with a variety of substances; thus, Hunter employed the red precipitate, or the sulphuret of arsenic. M. Jobert has greatly extolled the use of calcined alum; with him it was the philosopher's stone, and did not produce any of the inconveniences attributed to caustics. M. Ricord states, however, that he has employed it, and he found that the powder fell out of the little cup and collected around the meatus; hence he attributes the great number of cases said to have been cured by this treatment to sympathy, and not to any direct effect of the calcined alum; the instrument was modified, but the powder, in passing along the urethra, became hard, and failed in its object. The most powerful objection to this plan, says M. Ricord, is the great tumefaction it occasions. A patient was placed under this line of treatment, and the stricture dilated so much that a bougie of three lines in diameter passed. Two hours after we were called on account of a retention of urine, and with difficulty were we able to pass a catheter; thus, in spite of all the praises lavished upon it, this treatment is not without danger.

Of all the preparations which M. Ricord has tried, no one, he finds, possesses such decided advantages as does the nitrate of silver. Dis-

Porte Caustiques. Ferently constructed instruments have been used (Lallemand's.) (Ricord's.) for this purpose, which it would be useless for me to describe, as this is rather a practical treatise on venereal diseases, than one which professes to give an account of the various treatments which have been proposed.



M. Ricord now employs cauterization from before backward, in the following way: He introduces a canula, which encloses a stilet armed at its extremity with a little cup; as soon as the canula is in contact with the stricture, the little cup containing the powder of nitrate of silver, which has been melted by submitting it to the flame of a candle, is made to project, and thus the part is cauterized.

I have seen this treatment put into practice several times at the Venereal Hospital with the greatest success. One case I particularly recollect. M. Ricord had treated this patient during a month for a circular stricture situated in front of the bulb, and had not been able to get the smallest bougie through the stricture; one application of the caustic sufficed to permit a largish bougie to pass, and a cure speedily took place.

To apply the instrument, the canula must be first introduced, containing a bougie which is exactly adapted to it, in order that no mucus may get entangled in it. When the canula is in front of the stricture, the bougie is withdrawn and replaced by a stilet, containing at its extremity the little cup of nitrate of silver; and as the stilet is hollow, a very fine bougie is passed up it, and enters the stricture.

In order to cauterize the parietes of a stricture, I can strongly recommend the instrument of Lallemand as the simplest, and the one which best fulfills all the indications. It is composed of a straight or curved silver canula, containing a *porte caustique* fixed on a metallic stilet, which is either straight or spiral, in order to permit the rotation of the instrument. The instrument is passed beyond the strictured surface, the canula is then withdrawn, and the nitrate of silver is thus left ex-

posed to the parietes of the stricture, and may be turned in any direction desired. The *portes caustiques* of M. Lallemand are of different sizes, according to the greater or less tightness of the stricture.

Various have been the modifications, but they have again all merged into the old instrument.

Authors have differed in their opinions as to the time that the caustic should remain in contact with the stricture. Hunter considered one minute the proper time ; but when we remember the various sizes of the cup in which the caustic is contained, one minute may be too long, or not long enough. Without specifying any length of time, M. Ricord causes the instrument to make one or two turns, so that no more time be occupied than in cauterizing a balanitis, as it should be our object to touch superficially the parts, and not to destroy the tissue ; so employed, nitrate of silver is among the best of antiphlogistic remedies. It may be necessary, it is true, to reapply the caustic, but this is attended with no difficulty ; when you make little progress, you may generally suspect vegetations to be the cause.

No absolute rule can be given as to the necessity of reapplying the caustic ; if the case goes on favorably, it will be useless to have recourse to a second application, but if no amendment is observed, it may be employed daily. In books, it is stated that we should wait the separation of the eschars ; but they may come away during the night, or unobserved : again, if they are attached by any one point, some time will elapse before they separate, and the vegetations may have time to spread again.

M. Ricord usually follows this plan ; he repeats the cauterization as soon as the effects arising from the treatment have passed off. Cauterization is usually followed by pain in making water, accompanied with a slight swelling of the membrane ; the discharge, at first often sanguineous, takes on a muco-purulent character. Now, these symptoms having passed, and the stricture not being diminished, we reapply the lunar caustic ; if, on the contrary, a bougie now pass with ease, a second application of caustic is unnecessary, and the patient is soon cured. If, after having made a certain progress, the stricture remain in *statu quo*, we should again have recourse to cauterization, guided by the same principles ; thus, in place of any definite rules, the state of the patient can alone be our guide.

Having now stated my own opinions on the use of caustic, I shall give an extract from Sir B. Brodie's lectures :—

" Notwithstanding what I have now stated, I very rarely use the armed bougie in my own practice, and I never resort to it in the first

instance. My reasons for preferring the other methods of treatment in ordinary cases are these : 1st. Although the caustic often relieves spasm, it also very often induces it. It is true that, in many instances, also, it brings on a severe retention of urine ; 2dly. Hæmorrhage is a more frequent consequence of the use of the caustic than of the common bougie, and it sometimes takes place to a very great, and to an almost dangerous extent ; 3dly. Where there is a disposition to rigors, the application of the caustic is almost certain to produce them ; and frequently the application of the caustic induces rigors, where there had been no manifest disposition to them previously ; 4thly. Unless used with caution, the application of caustic may induce inflammation of the parts situated behind a stricture, terminating in the formation of abscess. I have known some cases of abscesses formed under these circumstances, which, from their peculiar situation, have proved more troublesome and more difficult to manage than the original disease."

Notwithstanding all our care, there are, it must be allowed, cases of stricture which not only do not yield to dilatation, but become aggravated under the employment of the caustic. Such are strictures depending upon cicatrices, bridles of mucous membrane, callous indurations, &c. Here, however, our art offers to surgeons resources that no theoretical speculations can contradict. In these forms of strictures, which undoubtedly are often very refractory, we may advantageously employ the knife, and this brings me to speak of *incision* in the treatment of stricture.

INCISION OR SCARIFICATION.—Previous writers on this subject have been too exclusive in recommending this treatment ; much good, it is true, may be derived from it, but it is far from being applicable to all cases, as some have pretended. From my own experience, I can cite many instances in which M. Ricord had recourse to it with signal success, where the two other kinds of treatment failed.

It is not of novel introduction, as mention is made of it before Hunter's time, although he gives no opinion upon it ; of late it has been revived by M. Amussat, and still more recently the instruments have been greatly modified both in France and England, particularly by Mr. Stafford.

The stricture may be incised in one of two ways, either from before backward, or an instrument may be introduced into it, and the parietes of the canal be slightly scarified in various points.

The first, which may be called *puncture*, and which has been proposed in cases where we are unable to pass an instrument through

the stricture, is a difficult operation, and often accompanied with danger, and one which the surgeon is not able to perform with certainty by means of the instruments which are at present in use. But there is no reason why we should despair. Science seems to authorize it in some cases; it is certain that false passages are not to be so much dreaded, and it becomes a question whether it is not better to attempt this puncture in extreme cases, than the alternative of puncturing the bladder in the hypogastric region.

(Instrument of
M. Ricord.)



Generally, however, incision should not be had recourse to, except when we can pass the stricture, and are enabled to treat it. Perhaps it may be here objected that, when we can introduce a bougie, it is unnecessary to use the knife; this is not the case, as may be collected from the foregoing observations. When we have recourse to scarifications, they should be very superficial; incision of the mucous membrane is only required when we are called upon to treat those bridles which traverse the urethra or strictures of considerable thickness. Various are the instruments which have been used, but their complicated nature has occasioned them to be laid aside. The instrument which M. Ricord now uses is a very simple one, as seen in the cut. It is composed of a grooved canula, through which passes a stilet, armed with a little blade, which is made to project at will. The advantage it possesses is its simplicity, and the facility with which it is cleaned.

It is passed down to the stricture, and the blade is then made to project, and the stricture is thus scarified; the canula is then withdrawn, and a bougie passed, which is left in for an hour each day, and gradually augmented in size. I have frequently witnessed the success of this treatment, and have never seen ill consequences arise from it.

Lately it has been seriously proposed to file down the callous substance of a stricture, and a still more modern invention is that of applying the actual cautery in the following ingenious manner: A catheter

is introduced down to the stricture ; at its extremity is a little cup ; one of its open sides contains a portion of spongy platinum ; a stream of hydrogen is now introduced into the canula, which ignites in the urethra, thus forming there an actual cautery. *A-priori* reasoning would lead to the supposition that the mucus and discharge would tend to prevent ignition ; but supposing ignition to occur, what is to limit the eschar which would result ? Such are the reasons which have prevented M. Ricord from putting this treatment in practice.

SECTION V.

AFFECTIONS OF THE PROSTATE GLAND.

I HAVE already incidentally alluded to the affections of the prostate. I propose, in the present section to speak of them more at large.

Causes.—Situated as the prostate is (and its position may be seen



(*e*) in the annexed cut), the surgeon can not be surprised to find that gonorrhœa, as it reaches the deeper portion of the urethra, will occasion disease here, as we have seen it do elsewhere ; and we may say that, among the many other causes, none acts so frequently as gonorrhœa, either directly or indirectly. Violent exercise, hard living, excessive sexual indulgences, gout, rheumatism, cold, skin diseases, are likewise so many causes which excite or predispose to the affection.

Symptoms.—There are no diseases at their commencement which are, perhaps, more obscure than these, and the reason is very evident. Rarely or ever do we meet with them in their uncomplicated forms ; the affections are masked by other complaints which are more painful, and give rise to or aggravate these, although, at a later period, diseases of the prostate, from the inconvenience they give rise to, become

the most prominent complaints.

In books may be found a catalogue of symptoms attending acute inflammation of the prostate ; these are said to be " violent pain immediately after passing water," heat and pain in the perinæum, frequent micturition, tenesmus vesicæ, intense scalding in making water. Evacuations from the bowels cause great uneasiness, and there often remains a sensation as if the rectum was not completely emptied. If the finger be introduced into the rectum, the gut feels hot, and sometimes the prostate is felt as a smooth, round, and hard body, projecting downward on the bowel, which the pressure made by the finger renders exceedingly painful.

I must admit that the cases I have met with do not exactly tally with these descriptions, nor can I say that I have seen acute inflammation of this gland ; I, however, do not doubt its existence, but believe it to be of rare occurrence. The affections that I am more especially acquainted with are subacute inflammations and chronic enlargements, and the symptoms usually present are the following : Patients, who are laboring under some affection of the genito-urinary system, complain of occasional or constant pain of a dull, aching character in the perinæum, which shoots forward toward the glans, and causes the patient to draw forward and squeeze the penis ; this pain occasionally extends down the thighs and toward the loins, and sometimes pain is complained of in the testicle. These symptoms are increased when the patient gets his feet wet, or drinks over night any acid wine, or when he has committed any venereal excesses ; in a few days they go off, and return in a more severe form, and at shorter intervals.

On some of these occasions the urine is not voided so easily as usual, or the call to make water is more frequent ; the stream may be forked, or stopped suddenly ; when urine passes, the pain is relieved momentarily, but an increased suffering is felt for a few minutes after its expulsion. The bowels are often constipated, and the motions may be flattened. Should the surgeon introduce a catheter, an obstruction may be met with, or the pain the patient feels in the perinæum will become aggravated and last some time. Various discharges will be mixed with the urine, or forced from the urethra. As the patient seldom empties the bladder completely, a certain quantity of urine will remain in the fundus, and this becomes highly colored and ammoniacal, adding considerably to the irritation. The finger introduced *per anum* detects the prostate enlarged laterally, but particularly on the left side ; and if a catheter be in the bladder, the prostate will present an unusual thickness.

The symptoms I have above described rarely occur in the child or adult ; it is usually in individuals advanced in years that we meet with them. Many patients are remarkable for their ruddy complexions and corpulency, but the affection is likewise seen in the pale or bilious-looking individual who leads a sedentary life ; and there is nothing, perhaps, which destroys the *morale* of men more than these complaints ; the sufferer is the wreck of the former individual.

Course of the affection.—Notwithstanding the severity of the symptoms we have described, the disease does not make very great progress, and persons live to a good old age notwithstanding. Some surgeons pretend that few men attain an advanced period of life without enlargement of the prostate ; and Sir A. Cooper considers it a salutary process when the affection produces a partial retention of urine, thus preventing incontinence, which would, in old people, almost constantly take place, were it not for this preventive.

The disease, however, has a tendency to increase, notwithstanding all our palliative measures ; and complications and affections come on one after another, until the patient sinks, either from exhaustion, inflammation of the bladder, urinary fever, &c.

Pathology.—I have already alluded to the condition of the parts, as far as we can detect them, during life, by means of the finger or catheter ; post-mortem examinations show that abscesses may occur in the substance of the organ, and open their way into the urethra ; and then the urine, introducing itself, will increase the mischief, forming fistulous openings, and all the consequences alluded to in that article. In chronic cases, the middle or third lobe will be found considerably enlarged, and is detected as the cause of the obstruction to the flow of urine, or the passage of the catheter, forming a valve behind the orifice. In consequence, the course of the urethra is altered, and its calibre diminished ; and if the lateral lobes are hypertrophied, the canal opposite the pubes is nearly obliterated. I have before stated, in speaking of strictures, that when any impediment occurs to the stream of urine, the canal behind it will become dilated : this circumstance happens in prostatic affections ; not only is it dilated, but elongated ; hence the necessity of employing a longer catheter than usual.

Sir E. Home, in his valuable work on the prostate, says that the surface of these enlarged portions of the prostate may become excoriated, and put on the appearance of ulceration. The mucous membrane which covers the middle lobe may be continued on each side in the form of a transverse fold. Cysts may form in or about the

gland, and become of the size of oranges, their inner surface being lined with coagulated lymph.

The gland will present great varieties of structure ; in some cases we meet with it completely softened ; others have a scirrhouss hardness.

The *Prognosis* is usually unfavorable, but of course much must depend upon the condition of our patient, the period at which we see him, and the complications which arise ; every case will present varieties, but too often our treatment can only be palliative. Sir E. Home, at page 69 of his work, says : " If attended to in proper time, the enlargement may in many instances be reduced, in others prevented from increasing, and, even in less favorable cases, rendered so much slower in its progress, that the patient's life is prolonged, and his sufferings mitigated in a very great degree."

The Diagnosis.—Sir A. Cooper says : " The enlargement laterally may be readily ascertained by introducing the finger into the rectum, but the enlargement of the middle lobe can not be so learned. In what way, then ? Why, by the introduction of a catheter or bougie, and the latter is the best ; it will be found to stop suddenly. You are then to introduce a catheter, for the purpose of drawing off the water ; the instrument will be resisted in its common course, and you must depress the handle a good deal, with a view of tilting its point over the enlarged gland : thus the end of the instrument will be rising perpendicularly, as it were, behind the pubes."

Treatment.—I have had occasion, in the last page, to notice the valuable observations made by Sir E. Home on the subject of the prostate gland. I shall, in speaking of treatment, cite him constantly ; and although his work was published in 1811, still modern surgeons have varied little the plans of treatment that eminent practitioner recommended.

In the first stage of the disease, when no absolute obstruction exists to the flow of the urine, great advantage may be experienced by cupping from the loins, or an application of leeches to the perinæum. These measures may be aided by a clyster containing opium, and the internal use of Dover's powder. The hip-bath may be prescribed, of a temperature agreeable to the feelings of the patient. I need not here state, that all causes which have given rise to, or can be supposed to aggravate the complaint, must be avoided. At this stage of the affection, the employment of catheters and bougies can not be too much reprehended. When irritation has been alleviated, the best effects may be expected from the use of hydriodate of potash, taken

in doses of from three to ten grains three times a day. Frictions with iodine or hydriodate of potash, on the perinæum, have appeared to me to be followed by a diminution in the size of the canal.

When the surgeon is called at a later period, the patient making violent and unsuccessful efforts to pass water, and the bladder being felt distended above the pubes, a warm bath, opium, and local bleeding, will often effect a palliation of the suffering, and enable the patient to relieve the bladder. When, however, this does not occur, the practitioner is called upon to act without delay, and the water must be drawn off, the same precautions being taken as were mentioned when speaking of retention of urine from other causes. I shall not, therefore, allude to them, except inasmuch as the precautions to be here taken depend upon the affection of the prostate.

Sir E. Home, who had such immense opportunities of treating these diseases, recommends that the instrument should be very soft and smooth, to prevent its disturbing the urethra ; rounded at the point, and as large as the canal will easily admit, that it may the more readily disengage itself at the turn into the bladder. The apertures in its sides should be wide, to prevent their being clogged by mucus or blood ; and the catheter should be pliant, that it may adapt itself to the form of the parts, and give little disturbance while retained in the bladder. Besides these properties, it is desirable that it should possess a permanent curvature at the point, even to a greater degree than is usually given to the common silver catheter ; and instrument-makers now manufacture them with a *permanent* and desirable curve, and they are far better than those which gain it by being kept on stilets, and which, when warm, have a tendency to assume a straight direction.

The catheter should be introduced (continues Sir E. Home) either toward the right or left side, with the handle nearly in a horizontal line ; and when it reaches the membranous part of the urethra, the handle should be gently and gradually brought toward the perpendicular line, the point all the time being kept in motion ; and when it is nearly upright, the handle should be depressed : when the flexible catheter has no stilet, a good deal of dexterity is often required. The great advantage of passing the instrument in a lateral direction is, that the point may by that means be guided into the space between the lateral and middle lobes of the prostate, where there is a groove along which it may be directed, between these two projecting parts, into the cavity of the bladder. When the point is entangled in the folds of the mucous membrane, instead of repeating the endeavors to pass the

instrument in the same direction, there will be an advantage in partly withdrawing the instrument, and trying to introduce it on the opposite side, where the same thing may not occur. If the catheter, with the stilet, can not in this way be made to pass, it must be tried without a stilet ; and if it is still prevented from going further than before, a finger introduced into the rectum, and pressing upon the curved part of the catheter, may give it a right direction, so as to guide it into the bladder.

Sir E. Home recommends the catheter to be left in the bladder, if any difficulty has been experienced in its introduction ; in respect to the position of the patient, his own comfort must be principally considered ; the standing position is, however, the best. The catheter may then be plugged, and kept in position by a common T bandage, the longitudinal band of which is divided up the middle into two portions, one of which lies in each angle between the scrotum and thigh, and furnishes a fixed point to which the catheter may be secured by ligature. The time that the catheter is to remain in the bladder must depend upon circumstances : it may be left three or four days, and then reintroduced and permanently kept there, or the water may be drawn off when required. The second introduction is less painful and difficult.

SECTION VI.

FALSE PASSAGES.

THE following article is a simple translation of a note by M. Ricord, on the subject of false passages, in the French edition of Hunter's works. As it is complete in itself, and as few English authors have written on the subject, I prefer giving it in the words of the author :—

Every point of the urethra may become the seat of a false passage ; hence we may meet with them throughout the whole course of the canal. The fixed points, as well as the moveable ones, present frequent examples. It is certain, however, that false passages occur more frequently in the curved portion of the canal, particularly in the membranous ; although they are met with in the prostatic portion,

in the substance of the prostrate itself, and at the neck of the bladder. Although they occur at the inferior border, still they may be seen at any point of the circumference of the canal of the urethra. They are of various dimensions, and may terminate by a *cul de sac* in some neighboring organ, such as the rectum ; or, after having passed through a certain thickness of tissue, they may enter the bladder, either by its anterior wall, or, as happens most frequently, after passing through a portion of the canal, placed behind the stricture, or in the body of the prostate ; or still again behind that organ, by penetrating its lateral lobes, or the fundus of the bladder, in which case the instrument passes between that organ and the rectum, or reaches it, having previously entered and passed again out of the intestine, as in an example mentioned by Deschamps.

There are a variety of circumstances which predispose to the formation of false passages ; thus, in addition to the situation of the stricture, the greater or less resistance of the diseased parts, the various directions which the urethra has undergone in consequence of abnormal or pathological states of the prostate, the accumulation of faecal matter in the rectum, will, in deep-seated strictures, tend to their formation. We must likewise consider, as predisposing causes, the nature of the stricture itself, as well as the state of the surrounding parts, the kind of instrument employed to combat or pass strictures, and, lastly, the greater or less care used by the practitioner.

False passages are more to be dreaded, in proportion as a stricture is firm, callous, resisting, and little dilatable. The narrower the stricture passage, the more have we to fear the occurrence of this accident, particularly when the stricture is of considerable length, and when several are present ; as the most anterior one necessarily interferes with the treatment or proper direction to be given to the instrument. Should the mucous membrane be subject to chronic inflammation, or should it be affected with *ramollissement*, perforations are very frequent, and it is not necessary that this disease be very well marked.

The instruments employed have a great influence on false passages. The flexible ones produce them rarely, while the use of inflexible ones often creates them. The size of instruments, also, should bear a proportion to the stricture. Still, in those cases which depend upon an hypertrophied state of the mucous membrane, or where spasm is present, it is better to employ bougies of a large size. As a general rule, however, the more the diameter diminishes, the greater chance there is of the occurrence of a false passage. Straight and inflexible

instruments employed in strictures, situated posteriorly to the bulb, have been frequently the cause of these accidents.

Allowing that instruments are more liable to produce false passages, in proportion as they are more pointed, as in the instance of conical bougies, the use of which has been too much condemned, still the lesions they produce are less severe than those which result from the employment of instruments of a larger size, and whose volume bears no relation to the strictured part. In fact, in the one instance we have only a simple perforation, or a species of acupuncture; whereas in the other a rent occurs of a considerable extent, together with a tearing away of the edges themselves. Pressure on the anterior part of the canal, as recommended by Hunter, and cauterization, as well as the operations we have previously described, may cause these perforations.

In fine, the most frequent cause of false passages, perhaps, exists in the hand which directs the instrument. A want of anatomical knowledge and practical skill, too great haste, have been often the cause of accidents that might easily have been avoided, independent of the existence of other predisposing causes.

To avoid false passages, let the surgeon hold the bougie as short as possible, in order that he may more effectually be able to appreciate the obstacles which he has to overcome, and the direction the instrument should take; let him draw the penis toward the instrument, in order that tension may be exerted on it, and thus obliterate the *cul de sac* which is frequently seated in front of the stricture. Let him follow externally the direction given to the bougie while it passes the perineum; let him introduce his finger into the rectum to guide the instrument as it passes along the prostatic portion, and take care that it does not deviate on either side; let him employ less force in proportion as the instrument passes with difficulty, and only push it forward when he has assured himself that the point is in the stricture.

Such are the directions for introducing the instrument in difficult cases, which, if attended to, and followed up by a judicious selection of bougies, will tend to the avoiding those accidents which, unfortunately, are of too common occurrence, particularly when ignorance is joined with a desire to show off by rapidity of execution.

The symptoms of a false passage consist of various ill effects which the patient experiences after the passage of an instrument. Among these, authors have enumerated haemorrhage. This symptom is of little value. There are many patients whose urethra bleeds very easily without the occurrence of a false passage. In many cases

bleeding results from a *ramollissement* of the mucous membrane. On the other hand, a false passage may happen without the occurrence of hæmorrhage, an instance of which M. Ricord mentions in his lectures, of an old man, who had a very severe stricture of a callous form: several ineffectual attempts to pass an instrument were made by a practitioner, and the spectators were not a little surprised, in one of these attempts, to observe the point of the instrument protruding beneath the skin at the ischion. No bleeding followed in this case, and yet there can exist no doubt that a false passage existed.

Various sensations on the part of the patient are of an equally doubtful nature; thus, some patients exaggerate their sufferings, declaring that they feel the point of the instrument pricking them, particularly at the fossa navicularis, at the bulb, and at the neck of the bladder—circumstances which lead to the belief that alterations occur where none exist. Other patients, on the contrary, suffer less than they expected, and your instrument may penetrate the walls of the urethra without the patient being sensible of it. Nevertheless, when a patient feels a sense of tearing or of pricking, it is an additional reason for the surgeon to be more careful than usual. Generally speaking, patients suffer more when the bougie passes by a false opening than when it enters the stricture; the sensibility of this last is not so great as has been pretended. Be this as it may, it is likewise certain that a bougie, once in a false passage, remains there with less pain than when it is introduced and left in the stricture.

With respect to the resistance felt, it is certain that in the majority of cases the sound parts resist less than the others, and the surgeon may in many cases be deceived by the facility with which his instrument passes. That sensation of tearing, which the patient and surgeon both feel, may depend upon the rupture of one of those bridles of mucous membrane above spoken of, or to a sudden abrasion of the strictured part, as well as a division of the parts in front. Nevertheless, when we have once entered a strictured orifice, the instrument is felt as if firmly grasped, a circumstance which never happens when a false passage has been made.

The absolute direction of the instrument in relation to the axis of the urethra, the possibility or not of executing rotatory movements with curved instruments, supposing them to be in the bladder, the fact of urine passing out by the catheter, when this instrument is employed, are symptoms upon which but little dependence can be placed. Indeed, a false passage may be made when the axis of the urethra is closely followed, and the instrument may reach the bladder by one

of those routes of which we have above spoken, without the surgeon being cognizant of it, unless it is by the occurrence of certain symptoms which, fortunately for the patient, do not always follow. On the other hand, without having deviated from the ordinary passage, the instrument, embraced tightly by the stricture, and shackled by a bladder which by a thickening of its walls has diminished in size, may give the surgeon an impression that it is taking a wrong direction, particularly if the eye of the instrument be momentarily blocked up by mucus or blood, thus preventing the passage of the urine. In addition to the signs above given, we may add that little value can be placed on the impressions of the *porte empreinte* of Ducamp, or on wax bougies. The same observations apply to the *toucher per anum*, and particularly the greater or less degree of hold on the instrument.

The accidents which follow as a consequence of false passages are not so severe as some authors, especially Hunter, have stated.

Thus, as long as patients can empty their bladder, and there consequently exists no retention of urine; when the false passage has been made with an instrument of small dimensions, and does not exist between the bladder and the stricture, it is to be considered as a circumstance of little importance, and one which may pass without the patient or the surgeon paying any attention to it; such, in fact, occurred in the case above mentioned as having been seen by M. Ricord. It is sufficient, when we are aware of the existence of a false passage, to allow our patient to remain quiet some days, without having recourse to a fresh introduction of instruments; the parts consequently cicatrize, the stream of urine, from the position and direction of the false passage, tends rather to bring together the walls than to introduce itself into the false passage, except in cases where the false passage is made from behind forward, as may occur when a bougie turns upon itself, and makes a false passage in front of the stricture.

In cases where the parts are forcibly torn, or where the employment of large sounds has produced abrasions, or caustic has destroyed the tissue, severe inflammatory accidents may arise, which may be either of a local or sympathetic nature. But, as long as a false passage is not in communication with the bladder, either through the means of the instrument which has produced it, or through consecutive ulceration, provided the patient can still make water, we may, by waiting and taking proper measures to combat the accidents, rationally hope to cure our patient. It is only in cases of extensive lacerations, accompanied with a complete retention of urine, and which call

for an immediate relief of the bladder by the catheter, or in those instances where the false passage communicates with the bladder or the rectum, that we have to expect the most serious consequences, and which call upon the surgeon either to puncture the bladder, or to combat those ill effects which result from the infiltration of urine. There are cases in which a false passage having been made, and the instrument having reached the bladder, everything goes on quietly, and shortly a new canal, provided with a false mucous membrane, results. In every case where there exists a false passage, the surgeon should recollect in what direction it has been made, and assure himself further of its existence by the *porte empreinte*; the exact situation of it should be ascertained, in cases where it has been caused by another surgeon, in order that his instruments may have a proper direction given them, so that he fall not into the same error as his colleague.

As regards the *treatment*, I have but few words to say, as it is indicated by what has already been stated. Thus, in slight cases, we should withdraw the bougie, and wait till the parts have healed; in more severe cases every endeavor must be made to introduce a catheter, which should be left in the bladder. If the introduction of an instrument be impossible, M. Ricord states that he is not certain whether he would not make a false passage into the bladder directly, rather than perform the operation above the pubis to relieve that organ, for we must resort to one or other alternative.

SECTION VII.

DISEASE OF COWPER'S GLANDS.

DURING the course of gonorrhœa, it not very unfrequently happens that we find an affection of Cowper's glands come on, and this affection is more common than is generally supposed; it may come on imperceptibly, and the patient take no notice of it until there is considerable swelling of the parts. This occurred in a case which I lately witnessed; in other instances there is fever, and all the symptoms of abscess; pain is felt in the course of the urethra, followed by fluctuation at one point, and difficulty in making water. M. Ricord

considers that the affection commences in Cowper's glands in consequence of the extension of inflammation, and that suppuration results, and has a tendency to make its way outward.

An abscess, however, may occur in the course of the urethra, in consequence of an abrasion of the mucous membrane, and a limited infiltration of urine follow ; the abrasion may heal, and a small abscess will result, situated close to the urethra ; such a case it will be impossible to distinguish from inflammation of Cowper's glands, if it occurs in or about the bulb. To the finger this abscess will give the sensation as if it were attached to the urethra by a pedicle.

The *treatment* must consist in attempting to prevent the formation of matter by antiphlogistic means ; or, if an abscess be present, unaccompanied with inflammation, we may reasonably expect to cause its absorption by rubbing the part with blue ointment. Should the skin become livid, not a moment should be lost ; it should be opened, and the matter allowed to escape ; the part will then heal, like any other abscess, or an induration will sometimes remain, which it will be necessary to treat by blisters, &c.

SECTION VIII.

INFILTRATIONS OF URINE.

As an indirect consequence of gonorrhœa, the surgeon is not unfrequently consulted on account of infiltration of urine, which I shall proceed immediately to consider.

The *causes* of infiltration of urine depend upon rupture of the walls of the canal of the urethra in some part of its course, proceeding either from a softened state of the mucous membrane, a consequence of inflammation (usually of a chronic kind), from rupture or pointing of an abscess, as mentioned in the last paragraph, from rupture due to violence, or to attempts in breaking a chordee.* Most frequently, how-

* The same effect is stated by Bell to follow from the injudicious employment of the armed bougie, and I have myself witnessed similar consequences result from the employment of instruments which divide the stricture. M. Civiale, in his "Traité Pratique sur les Mal. des Org. Gen. Urinaires," states that infiltration follows the lodgment of stones in the urethra, and cites several cases to prove this position.

ever, infiltration is due to a bursting of the urethra behind a stricture, depending equally upon a *ramollissement* of the canal at that point, the action of the abdominal muscles, and an hypertrophied bladder.

The Symptoms.—The patient suddenly feels that the urine has escaped, although none passes by the urethra. A short time only elapses previous to a swelling appearing in the perinæum, scrotum, or penis. The pain in those situations is often very violent, and the patient becomes aware of the danger he is in; the constitution soon begins to sympathize; his pulse at first is full and rapid, but soon becomes feeble, intermitting, and irritable, the tongue is dry and cracked, the countenance altered, and typhoid symptoms set in with remarkable violence.

Provided no treatment is resorted to, the symptoms become more aggravated; the skin and cellular tissue assume a dark color, and gangrene follows; large pieces of mortified structures become detached, and the bones, aponeuroses, and muscles, are exposed; and Desault speaks of cases in which he has seen the whole of the skin of the scrotum, that of the perinæum, and the upper part of the thighs, come away, leaving the testicles floating in the midst of this immense ulcer. The patient sinks under this fearful complaint, breathing his last in the midst of convulsions, or, what is more common, he falls into a state of stupor, which rapidly increases.

The direction which the urine follows is usually toward the root of the penis, thence to the perinæum, the scrotum, and penis. Anatomy might induce the surgeon to believe that the infiltration would differ in the direction it takes, as rupture of the urethra occurs in one or other part; but practice does not bear out the theory, and the extent and rapidity of infiltration seem rather to depend upon the size of the rupture, upon the resistance of the aponeuroses, and the contractions of the bladder, than on any other circumstance; and this, perhaps, is less surprising, when we consider that in almost all these cases the natural texture of the parts is much modified by long-standing disease.

The Treatment.—As the presence of the urine in the cellular tissue causes the mischief which is momentarily increasing, no time must be lost; the infiltrated tissues should be freely divided. The number, depth, and direction of the incisions must depend upon the circumstances of each particular case, and care must be taken to leave a free passage for the urine, otherwise a second train of symptoms may arise. M. Civiale, in his valuable treatise above alluded to, states that young practitioners too often fall into the error of not cutting the infiltrated parts sufficiently deep; for (says he) the swelling is con-

siderable, and, on its abatement, the young surgeon will be surprised to find how superficial have been his supposed extensive incisions.

Provided these incisions are made at an early period, the very best results may be expected ; and all authors who have written upon this subject are agreed that even at a very late period the surgeon may hope for success from an energetic treatment, provided there be sufficient power in the constitution to rally and support the throwing off of the sloughs. Here, as in most cases of gangrene, the deformity which ultimately results is not commensurate with the destruction of parts, for " nature has resources without limits," as Desault remarks.

SECTION IX.

FISTULOUS OPENINGS.

IN consequence of any of the causes above mentioned, fistulous openings may be left, which it will be very difficult to cure ; and to their consideration I shall now direct the attention of my readers. "Fistulous openings," says M. Ricord, "may occur in any portion of the perinæum or urethra. They may be complete or incomplete ; that is to say, they may terminate in an abscess, or on the surface of the skin. Internally, they have usually only one opening ; externally, they may present several. Their direction may be variable : when they open into the bladder, the urine will escape in proportion as it is secreted ; we shall consequently perceive a constant dribbling from the fistula. When, on the contrary, the internal opening is beyond the neck of the bladder, the urine will escape only when the patient attempts to make water. There are, however, certain circumstances which may lead the surgeon astray, viz. : when the internal opening is close to the neck of the bladder, and that organ contains but little urine, the fluid accumulated in the lower part will be only passed during the involuntary contractions of that organ. Various pouches in the course of the fistula, as well as communications between the vagina or rectum, may likewise impede the exit of the urine. When the urinary fistulæ open into the rectum, urine will be passed only when the patient goes to stool ; however, the presence of the urine will so far irritate the rectum as to give rise to tenesmus, which is

very severe and habitual. The more numerous the fistulæ, the greater will be the alteration of the tissues submitted to the action of the urine ; the skin becomes thin and detached ; ulcerations form, or else induration or a horny degeneration ensues ; gangrene, also, will destroy the cellular tissue in all cases where adhesive inflammation does not oppose a check to the passage of the urine. The aponeurotic layers themselves may give way ; the bones in the neighborhood may become exposed, carious, or necrosed ; and lastly, the surrounding tissues may undergo a degeneration, and be converted into a cancerous or fungoid mass. As long as any obstacle to the free passage of urine by the urethra exists, the fistulous openings will evince but a slight tendency to close ; from the moment, however, that the canal becomes free, the cure of the fistulous opening will be speedy, and in proportion to their short duration. This, therefore, becomes a point of importance in regard to the prognosis, as recent fistulous openings are not provided with those false mucous membranes which are found organized in cases of old standing.

The temporary employment of bougies is frequently of itself alone sufficient to cure fistulous openings. In proportion as the calibre of the urethra is re-established, the urine passes in a less quantity by the fistulous opening, and a cure speedily takes place. But this treatment is not one which succeeds so well or so often as some others. A great number of fistulous openings do not yield, and it becomes, therefore, necessary to keep a catheter permanently in the bladder. In addition to these precautions, a surgeon should take care to give the urethra its proper calibre ; he should, in addition, provide against the urine passing through the fistulous opening. This, however, is not always easy, as urine will pass between the walls of the canal and the bougie, and thus reach the fistulous opening, or when the instruments are removed in order that the patient may make water. The greater number of surgeons show a preference to catheters which are left open, and which, without injuring the canal, fill it so completely, that the urine, finding an easy and continual passage, does not escape through the fistulous opening.

When, however, a certain degree of dilatation has been obtained, or if this be too much increased, we shall, as Dupuytren so justly observed, prevent cicatrization of the internal orifice by keeping its borders separated, and the cure is only obtained by gradually returning to the employment of smaller instruments, or in altogether laying aside their use.

In some cases it has been recommended to attach a piece of sponge

to the point of the catheter, as it was supposed that such means would more effectually tend to empty the bladder; more recently a piece of thread passed through the eye of the instrument has been supposed capable of the same effect, acting by capillary attraction. Other plans have been recommended, but they do not present sufficient practical advantages to induce us to dwell upon them. When the surgeon leaves a catheter permanently and open in the bladder, he should, to a certain extent, oppose the free passage of air by means of an empty bladder attached to the distal extremity of the instrument.

Catheters, however, sometimes irritate the portions of the canal which they touch, and occasion inflammation and suppuration; in such case, the persistence in the use of instruments, far from ameliorating the state of the disease, only tends to aggravate it, or keeps it up by the passage of the pus through the fistulous openings.

In these cases the treatment must be laid altogether aside until the unfavorable symptoms have passed away, or it should be only employed at intervals, so as to keep up the improvement which has been made.

The fistulous openings must, however, be attended to, when they are lined with a false membrane: it will be usually necessary to employ the knife, and incise them like all fistulæ in other parts of the body, that their parietes may cicatrize. But this treatment should not be employed until catheterism has failed.

In employing cauterization in these cases, care should be taken to attack the internal opening and the deeper portions, as well as at the external orifice of the fistula. I have succeeded by cauterizing the urethra at the point of the stricture, or behind it, in order to reach the internal opening, and I have injected the fistula with a solution of nitrate of silver, containing forty grains of the salt to the ounce of water. In cases where the fistulous passage is sufficiently large, I have introduced a conductor containing solid nitrate of silver; in other instances I have employed a stilet surrounded with lint dipped in nitric acid. I have obtained sometimes good results from the employment of the actual cautery; this, however, is only applicable when the passages are short and direct.

A great number of fistulous openings, which are placed in front of the scrotum, or on various points of the spongy portion of the urethra, resist all the means we have yet spoken of. Some of these fistulæ consist in simple apertures, which it is next to impossible to feel between the skin and the canal. On the contrary, in other cases, there is a complete loss of substance, forming a species of *hypospadias*; to these the name of fistula no longer belongs, as one opening only ex-

ists, there being no fistulous passage. To judge of the difficulty of curing these cases, the surgeon should have them under his own care, the difficulties arise from the slight thickness of the cellular tissue, which is very loose in this situation, and from the interruption the process of cicatrization undergoes from the different size which the penis assumes in erection, or while quiescent.

I have tried, on three patients at the Venereal Hospital, that form of suture recommended by my learned friend M. Dieffenbach, which consists in passing a thread round the fistula at the spongy portion of the urethra, and then drawing it together between the skin and the canal. In these three cases the operation has failed, although performed with the greatest precautions. Two of these patients have been operated upon three times, and the third has had the ligature applied twice. At each new trial I employed some new modification, without, however, gaining my end. In one instance the passage was sprinkled with the tincture of cantharides; in another it was touched with nitric acid and caustic. Once I kept an open catheter permanently in the bladder; on another occasion I allowed the catheter only to be opened when the patient felt a desire to make water; and in a third attempt I left the canal free, and the patient was cured.

It is well known that little success has attended the attempts of surgeons to remedy the various degrees of *hypospadias*; the results have been similar in the attempts to apply them to accidental loss of parts. On a patient, who had lost two thirds of the inferior portion of the spongy part of the urethra between the scrotum and gland, and upon whom M. Breschet had previously unsuccessfully employed two sutures, I failed likewise in obtaining any benefit, although I tried one of the plans recommended by M. Dieffenbach, which consists in dissecting the skin on either side of the abnormal opening, to a certain extent, and bringing nearly together the flaps by means of strips of plaster, having previously resected the edges. I had recourse, also, in the same patient to the *urethro-plastie*, performed at the expense of a flap of skin taken from the scrotum; but in this case the operation partly failed, union not taking place to the extent of a third of the opening, and this in consequence of a circumstance which it is important to mention, namely, that at this point the border of the flap was ecchymosed at the time of union. The other operations, I think, have not hitherto been sufficiently tried.

CHAPTER III.

BLENNORRHAGIA IN THE FEMALE.

IN reference to the cause of this disease in the female, it may here be stated that we have seen it developed spontaneously, independent of sexual intercourse, and as a result of certain pathological conditions of the system; we have likewise traced blennorrhagia to a lymphatic temperament, to skin diseases, to teething, &c.

We should be only repeating what we have previously stated in speaking of the causes of blennorrhagia, were we to enter more fully into the subject. There are, however, causes which are peculiar to the female genito-urinary mucous membrane. Thus, connexion at too early an age, or when the male and female organs are disproportionate, will frequently occasion it. M. Ricord states he has never been able to ascertain satisfactorily that there existed any relation between the cause and any particular portion of the mucous membrane, the seat of the disease; thus, the same cause may produce blennorrhagia of the vulva, vagina, &c. In fact, on this subject there is no rule. He states that he has been able to convince himself that whatever may have been the cause of the discharge, still the vulva, urethra, vagina, or uterus, may be alone, or simultaneously affected. Nevertheless, he is persuaded that in the female the urethra is more generally affected alone, or at the same time with the other organs of generation, when the blennorrhagia is the result of impure connexion.

Morbid Appearances.—As this branch of the subject is new to English readers, we shall treat of it at some length, and illustrate our observations by appropriate drawings. In our investigations on this subject, we have been kindly aided by M. Emery, of St. Louis; and M. Danyan, the surgeon of the Female Venereal Hospital, has, by a particular favor, allowed us to inspect the patients intrusted to his care; and M. Vidal de Cassis has likewise placed at our disposal every facility for studying these diseases. Thus, in a short space

of time, an immense number of females have passed under our care, and we have, in the intention of publishing, kept particular notes of the cases. Not contented with what we have read, we have personally seen what we here describe ; not resting satisfied with examining the external organs of generation, we have, by means of the speculum, and under the direction of these professors, narrowly investigated the internal organs of those females intrusted to our care.

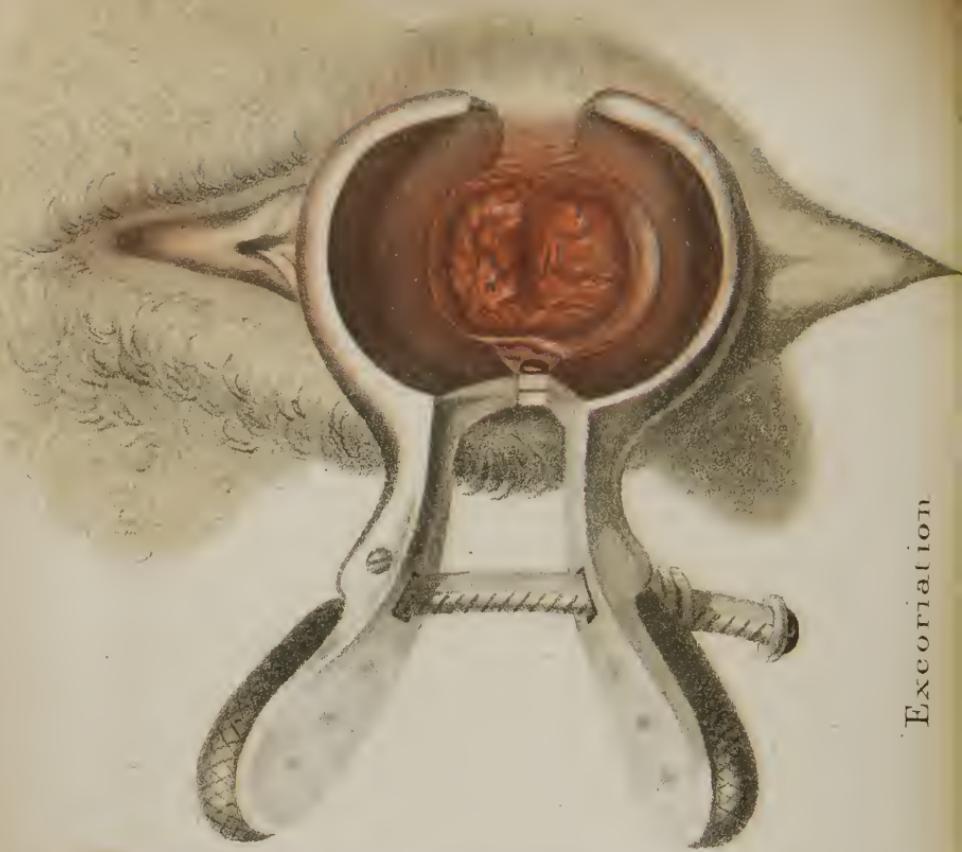
We have found the mucous membrane in its whole extent, or in isolated points, of a red color, accompanied by swelling, heat, and pain, unattended by any secretion ; thus presenting an erysipelatous state, which may last a short time, and then disappear entirely, and also we have seen other cases, which present the first stage of catarrhal inflammation, give rise to a morbid secretion, the color and consistence of which are very variable ; this difference seems to have no reference to the cause which has produced it.

In examining the vulva, vagina, or the neck of the uterus, we have observed the mucous membrane covered with papulae or follicles, more or less developed, constituting a papular vaginitis, or utero-vaginitis, a *psorélytrie*, as M. Ricord terms it ; sometimes assuming the form of small spots, in size not larger than a pin's head, and isolated, or more or less confluent. In other cases, these papulae look like granulations deprived of their epithelium ; lastly, they may assume a fungous appearance, or the form of vegetations. (See Plate I., fig. 1, 2.

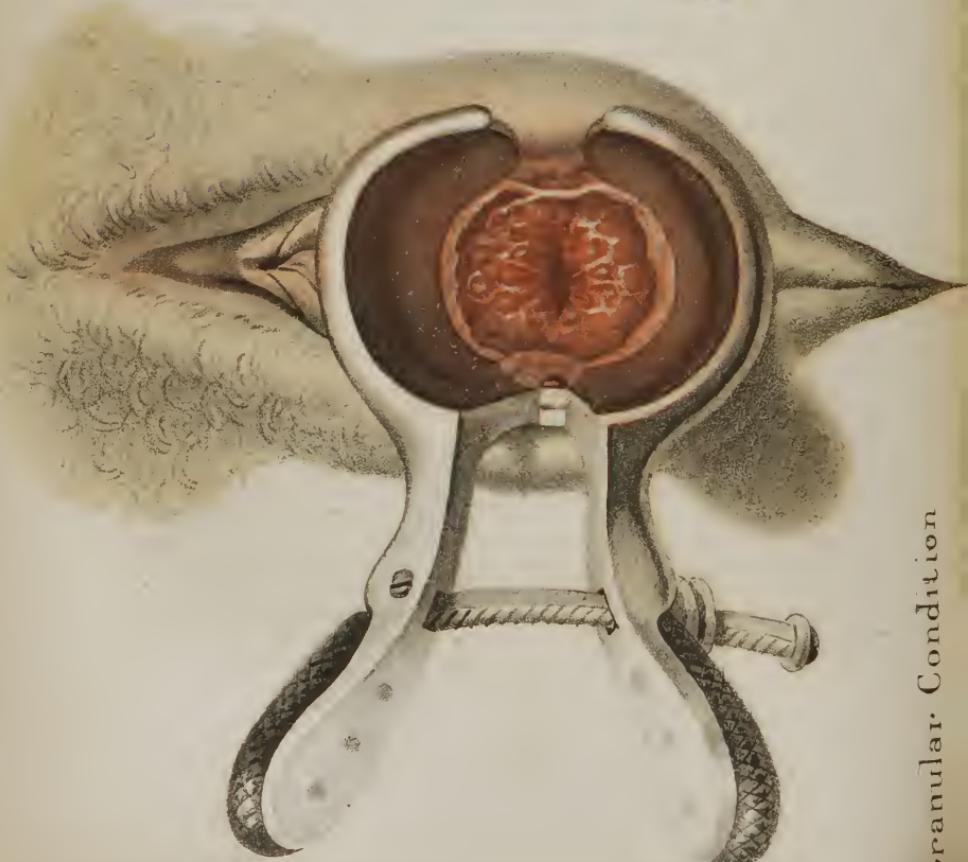
On the same portions of the mucous membrane we have distinctly seen patches more or less numerous, and varying in extent, which have a striking analogy with the suppurating surface of the skin on which a blister has been applied. M. Ricord has likewise witnessed a case in which an eruption of herpes phlyctenoides was present on the neck of the uterus, and the posterior part of the vagina : lastly, we may find ulcerations of every description seated on the whole or any part of the surface of the genito-urinary mucous membrane. Pl. II. A.

The discharges from the urethra, vulva, vagina, and uterus, which we have examined, have been very various ; but the difference has not appeared to us connected with any one lesion or cause more than another. *The acute stage*, whatever be the particular lesion, causes, at its commencement, a secretion almost wholly serous, or only consisting of healthy mucus, more abundant than usual, but becoming opaque, then purulent, or of a darkish yellow color, sometimes greenish, and at times mixed with blood. *The chronic stage* often gives rise to a milky secretion of a thickish consistence, similar to that of cheese, or simply to a mucous flux.

Excoration



Granular Condition



The chronic discharge may put on a rusty appearance, and become tinged with a larger or smaller quantity of blood. These secretions, whether in an acute or chronic stage, may have no smell; or, on the contrary, have a very unpleasant odor, particularly when the mucous papulæ exist. The smell, *sui generis*, is often so decided, that it is characteristic in a great number of cases: under other circumstances, it resembles the smell of cancer, or that of feculent matter.

The only differences which result from the particular seat of the blennorrhagia are, that the secretions which come from the uterus are always more mucous, thready, and collected into flocculi; whereas, those which escape from the urethra, vulva, or vagina, present a less tenacious character than the others.

The Symptoms of blennorrhagia in the female do not present differences which always have a relation to the cause which has produced it; these symptoms are more especially connected with the precise situation, or the degree of severity of the complaint. As the disease is, for the most part, purely local, be its exact seat what it may, we do not find general symptoms present; in a few cases, however, sympathetic or constitutional symptoms accompany the affection, particularly such as depend upon the circulation; the nervous system may likewise participate, and the digestive organs may suffer.

We have seen women affected with both acute and chronic discharges, and yet complaining of no pain, and would have been apparently unconscious of suffering from a blennorrhagia, were it not for the stains which they were unaccustomed to see on their linen, or in consequence of their husbands contracting the disease. Nevertheless, an inconvenient sense of heat of the vulva, accompanied with itching, usually announces the commencement of the disease.

To treat, however, the subject systematically, we must describe *seriatim* the affection as it occurs in the various parts of the genito-urinary mucous membrane. Thus the symptoms of *blennorrhagia of the vulva* consist in a swelled state and redness of the nymphæ, together with a good deal of irritation; on separating the nymphæ, the morbid secretion at once appears, which may be confined to the vulva alone, or may escape and become matted and harden on the hair of the external organs, forming thick and offensive crusts, which completely cover the parts. Fat women are more especially subject to it. Patients laboring under this form find a difficulty in walking; the desire of sexual intercourse is often increased, but it is usually at-

tended with pain. The discharge renders, of course, the diagnosis easy.

In blennorrhagia of the urethra, there is pain in making water, but slighter than in the affection of the male, and in some cases no scalding is felt ; therefore, the absence or presence of this symptom is of no great value as a diagnostic sign : dysuria sometimes accompanies the affection ; the introduction of a catheter is, however, seldom called for. The secretion does not at once meet the eye ; in order to satisfy himself if really any is to be found, the surgeon should take the following precautions : Having introduced the first finger into the vagina, the pulp turned toward the symphysis pubis, let him press somewhat firmly the urethra against the bone, at the same time withdrawing the finger. In this manner, if pus be present in the canal, it will be squeezed out, provided the female has not lately made water, and she has a blennorrhagia of the urethra. We have by this means detected the presence of a disease that other practitioners have not suspected. M. Ricord estimates that the urethra is affected in eight cases out of every twelve females suffering from discharges of the genital organs.

Blennorrhagia of the vagina is attended, in the majority of cases, with little pain : the disease seems to be very indolent, particularly when no foreign substance comes in contact with the mucous membrane ; we have, however, been unable to introduce the speculum in some cases without causing pain ; in others, the slightest touch becomes insupportable, and consequently the act of going to stool is very painful. In cases of this nature, the surgeon will not immediately perceive the discharge, as a narrow vulva may occasion an accumulation of the secretion in the posterior part of the vagina ; large quantities of feculent matter in the rectum, or a full bladder, will tend to the same effect, and thus the discharge escapes only when the patient makes efforts to go to stool or pass urine.

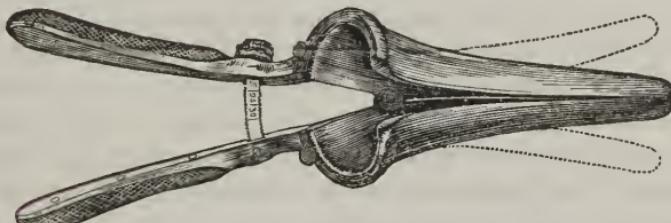
The surgeon should be aware that the traces of a discharge are to be looked for, not on the front part of the linen, as in the male, but behind ; and if a woman keep herself clean by frequently washing the parts, or retaining a sponge in the vagina, he will with difficulty ascertain whether she be diseased or not.

Blennorrhagia of the uterus may be commonly recognised by the usual symptoms attendant on inflammation of that organ, viz., a painful feeling of weight in the pelvis, a distinct sense of heat communicated to the finger of the surgeon placed on the neck of the uterus, great pain felt by the patient, when the uterus is pressed upon, from

the vagina, as well as from the hypogastrium, a sense of dragging in the iliac region, and derangement of the menstrual function : all these symptoms may, however, be absent, although there is an acute blennorrhagia and free discharge from the uterus.

Such an affection as this, which thus shows itself by a discharge from the external organs, we can not investigate without the aid of the speculum. The same may be said of the deeper lesions of the vagina, or of the neck of the uterus ; it should not be our object alone to ascertain the exact character of the discharge and the complaint which gives rise to it, but likewise to convince ourselves of the condition of the mucous membrane, the morbid states of which we have before described.

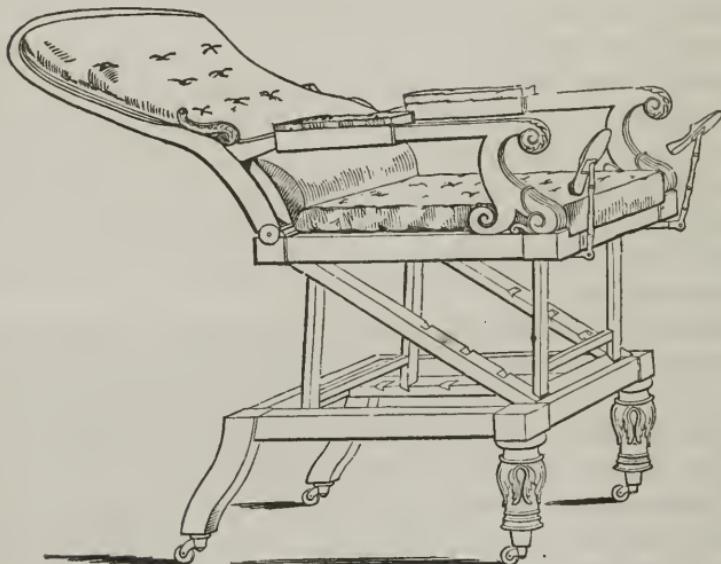
Without any further remarks on the necessity of employing the speculum, as we feel convinced that time will overcome the prejudices which exist in England against its use, more than any argument we can urge in its favor, we shall at once proceed to describe the instrument that M. Ricord uses, and which, by personal experience, we can recommend to our readers as being of easier application for the surgeon, and less painful to the patient. It consists, as may be seen in the accompanying woodcut, of two valves united at about the mid-



(The Speculum.)

dle point, allowing both extremities to be widely opened ; the narrowest part is thus placed at the vulva. To each valve a handle is attached, by which means space is gained, and the light falls upon the interior uninterruptedly, and pressure on them causes a dilatation of the two extremities, which can be maintained, diminished, or increased, by means of a screw. It has the further advantage of being adapted to the young and the old ; one instrument serves alike for all, and the surgeon is not obliged to have a series, as happens when he employs the common speculum. Its employment is very simple, but, like passing a catheter, requires some practice.

The patient should be placed on the edge of the speculum-chair, as seen in the annexed woodcut, or on a bed, with a pillow under the



(Speculum-Chair.*)

head and shoulders, the thighs bent on the pelvis, and the legs on the thighs, the feet supported on two chairs. The surgeon should place himself between the lower extremities of his patient, and requires no assistant—an important thing in private practice. The speculum, previously warmed and greased with a white pomatum, is thus to be introduced : Holding the valves of the instrument firmly together with the right hand, the surgeon should separate the nymphæ by means of the index and ring fingers, while, by the aid of the middle finger of the left hand, he depresses the lower part of the vulva.

This should be done gradually, but gently ; at the same time the extremity of the speculum should be introduced, the handles turned toward the left thigh ; the side of one of the extremities of the valve should press upon the middle finger ; the other valve will necessarily

* I here introduce to the notice of the profession a chair which answers admirably for nearly all surgical operations. Its recommendations are its simplicity, firmness, and general application to surgical purposes. It looks like an easy-chair in a library, and may be raised to a sufficient and convenient height. It embraces the latest improvements, and is particularly distinguished from all others by the inclination of its seat. I can not too strongly recommend to the profession the maker, Mr. Moon of Orange street, who has so ably assisted me in its construction.

be applied against the posterior surface of the meatus, along which the surgeon must pass it by depressing the instrument, without tearing or excoriating the mucous membrane. As soon as the speculum has passed the ring of the vulva, it should be directed in the axis of the pelvis, and the operator should separate the valves; by this means he is enabled to see the condition of the vagina and uterus, and, finally, the instrument will surround the neck of that organ.

It is unnecessary for this purpose to employ a very long instrument, or push it on until the neck of the uterus is embraced, as this would expose the organ to laceration, and cause great suffering if the instrument should be caught in the *cul de sac* of the vagina, as often happens. To avoid this, we recommend that the situation of the neck of the uterus be previously ascertained by the *toucher*, so that the instrument may fall at once upon it, and the neck of the uterus will be recognised by the smooth condition of the mucous membrane, and by its color, which usually differs from that of the vagina. Useful indications for finding it may often be derived from the streaks of white-of-egg-like mucus, which flow from the uterus into the vagina. In spite of these indications and precepts, should the surgeon find the speculum entangled in the *cul de sac* of the vagina, instead of pushing it onward, let him gradually withdraw the instrument, at the same time that the valves are separated, and the neck of the uterus will at once come into view.

This was the method which M. Ricord followed when he formerly had the care of the females, and such is the plan we have adopted when we introduced the speculum at the Hôpital de L'Ourcine, and we have never met with any difficulty, although we were often called upon to employ it in cases of various deformities of the osseous system, &c.

There are, however, certain counter-indications which should prevent the surgeon from introducing the instrument, at least for the moment.

These are, first, a severe inflammation of the vulva or vagina; secondly, the existence of the hymen, which the surgeon ought generally to respect; thirdly, the narrowness of the vagina in very young girls; fourthly, the occurrence of various bands of well-organized membranes, which are sometimes met with in women that have had children; fifthly, during the period of menstruation, as it is then useless. The speculum may be employed, even though a woman be pregnant, provided the surgeon thinks the case requires it, and if the instrument be employed with care.

M. Ricord states that the French female in high life is now so reconciled to the use of the speculum, that he often receives notes requesting his attendance, and, in the postscript, a demand that he will bring his speculum. At the hospital, when M. Ricord took the service, in 1830, a revolution broke out, and a *strike* against the speculum occurred ; however, a few days of bread and water quieted this revolt of the harem ; and now the women are so convinced of the benefit, that they think no more of its introduction than they do of having a blister dressed. They can, however, appreciate instantly the tact of one surgeon over another in introducing it.

The Complications of Blennorrhagia.—We shall now proceed to describe these, more especially as their consideration will lead us in some measure to consider the diagnosis of the various forms we have above detailed. *In the affection of the vulva*, and as a consequence of want of proper attention to cleanliness, especially in fat women, erythema or eczema may appear on the thighs or external organs, and give rise to a muco-purulent secretion, thus assuming a form of external blennorrhagia, particularly in the groin ; such a state often precedes the breaking out of mucous tubercles. The vulva may likewise assume an oedematous condition, by which means a species of phymosis of the nymphæ occurs, and gangrene arises ; this may be followed by an induration, which lasts a longer or shorter time, or an abscess sometimes forms, which, if not opened speedily, may extend to the perinæum, and produce a fistulous opening, which it is very difficult to treat. Abscesses here often result from cysts, and are liable to return, unless the cyst be entirely cut out. We have, in the Hôtel-Dieu, seen a striking example of a frequent return of the complaint in consequence of this treatment not being followed.

The inflammation of the urethra may extend to the bladder, giving rise to cystitis, retention of urine, dysuria, depending upon spasm or an inflammatory state ; in some rare cases there is hæmatury.

The blennorrhagia of the uterus may be complicated with the various morbid general sensations we have previously described : to these we shall not now revert ; but there is one which we believe is new to English practitioners, at least we do not remember having read of it in English works. We allude to an *ovaritis*, which bears an analogy with epididymis in the male. Thus a female suffering under uterine blennorrhagia may be seized with shivering and a feverish state of the system ; vomiting may come on, together with pain referred to the iliac fossa, where more or less tension may be present (in no way resembling that superficial pain produced by peritonitis) ; pressure on

the os uteri gives no suffering ; but if the finger be carried up the *cul de sac* of the vagina, and the patient desired to turn upon the opposite side, pain of a most acute kind will be felt. The blennorrhagia may cease for the moment, one ovary may be attacked only, or both simultaneously, as in epididymitis : revulsion will explain the partial cessation of the discharge.

Lastly, we believe that a great number of ovarian dropsies may result from a chronic inflammation of that organ, the consequence of such complications.

A frequent complication of blennorrhagia of the uterus is the occurrence of *ulcerations*. These may be either specific or simple.

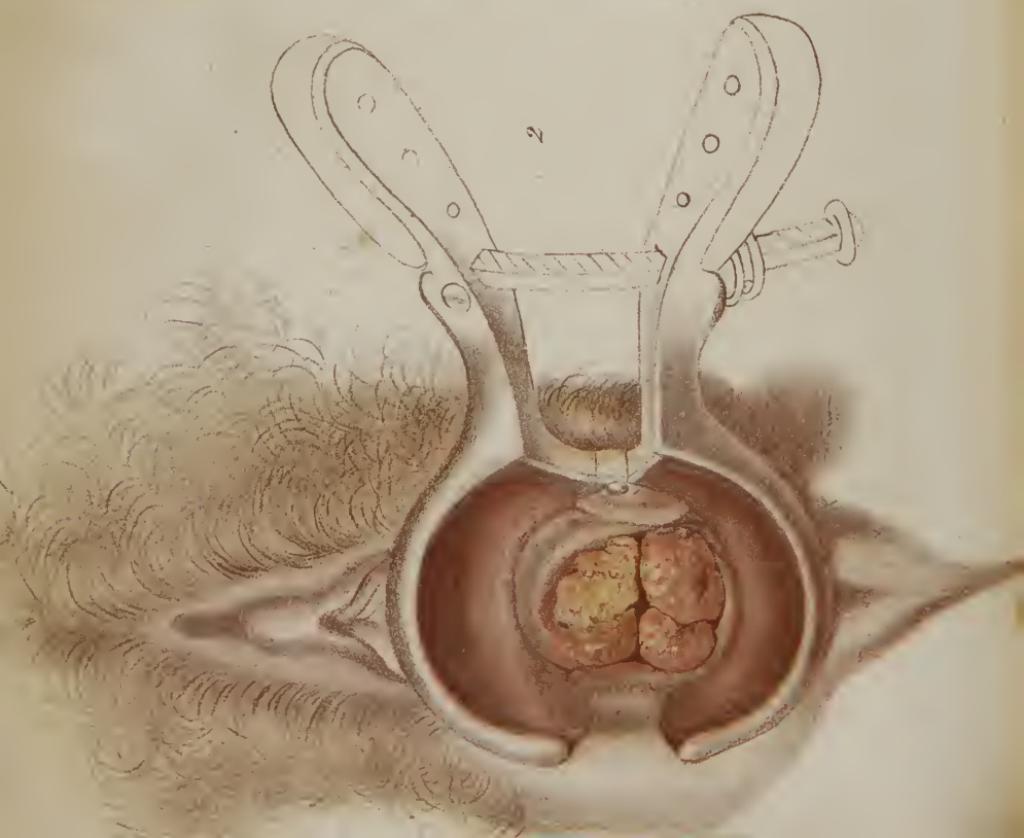
The *specific ulcers* may be usually distinguished by being isolated, although they may occupy any portion of the neck of the uterus ; they may be further distinguished by giving rise to the characteristic pustule, when inoculation is tried : the granulations which appear upon their surface rapidly heal, leaving, however, a considerable state of induration. Lastly, secondary symptoms will follow after some time.

Simple ulcers arise as a consequence of inflammation ; they are seldom distinct : commencing at the interior of the uterus, they make their way outward, have a great tendency to throw out granulations, but seem little disposed to cicatrize ; by such signs the surgeon will usually be able to diagnose a simple from a specific ulcer. During its progressive stage, or after it has cicatrized, provided no induration follows, it is not easy to form an opinion ; but this is not important, as the treatment will be the same. The consideration of this subject naturally leads me to mention some points which present certain difficulties for the surgeon. The medical adviser is often consulted to know if a blennorrhagia has been transmitted, or is transmissible ; or, in other words, if the disease under which the female labors be contagious, has arisen spontaneously, or be the result of a sexual intercourse with a diseased person ? The fact of a blennorrhagia having been contracted by sexual intercourse is, as we have before observed, no proof of the *syphilitic* or *virulent* nature of the discharge. On the other hand, a *virulent discharge* in a female may occasion a mild affection in the urethra of the man who has connexion with her, it acting not in virtue of its specific influence, but as a simple irritant. M. Ricord, in consequence of the various investigations he has made relative to this subject, is convinced that a female perfectly free from disease herself may communicate either a chancre or gonorrhœa ; that is to say, the virulent matter may be deposited in her vagina by

one individual, and may be taken up by another in subsequent connexion, without her becoming affected by it—she is the reservoir simply ; this happens not unfrequently in girls of the town.

Admitting, as we do, that various causes may occasion in the female, as in the male, a blennorrhagia which is variously designated by the terms *whites*, *fleurs blanches*, still blennorrhagia, depending on these causes, is more uncommon than is generally supposed. In fact, those women who communicate the disease present, on examination, some considerable lesion, such as we have described above ; hence, whenever a patient presents himself, complaining that a woman has infected him, the surgeon, in ninety-nine cases out of a hundred, will be right if he states that the woman with whom he has had connexion is herself diseased. Persons having connexion with these women do not, however, necessarily contract the disease, although it is probable that they will do so.

Many persons have wished to distinguish the whites, or *fleurs blanches*, from blennorrhagia. This, however, they have been unable to do ; and it is not surprising that it is difficult to distinguish things which are exactly similar in form, and which only differ, if we may be allowed the expression, by an essence that we can not discover. There is nothing, either in the particular seat of the affection, neither in the appearance of the discharge, nor in the alterations of the tissues, which can distinguish leucorrhœa from simple blennorrhagia. The only possible differential signs, in some few cases, might be drawn from a knowledge of the causes ; thus, in admitting, as some do, that the whites are those discharges which arise from the influence of individual or general causes, then, under the head of blennorrhagia, we should arrange all other discharges which arise as a consequence of mechanical, chymical, or virulent causes which have acted *directly* on the organs of generation. Such distinctions are, however, impossible in by far the majority of cases, in consequence of the little degree of confidence the surgeon can place in the stories of patients who deceive themselves, or wish to deceive him. The most important task, then, the surgeon has to perform is to decide whether the blennorrhagia be virulent or not. If a chancre be present, no doubt can remain in his mind that the disease is a virulent one, and that it has been contracted from sexual intercourse. In other cases the diagnosis should be very guarded ; care should be taken in the wording of certificates that a medical man may be asked for. “ After carefully examining Mrs. ——, I do not find she is laboring under any syphilitic affection, but is subject to a discharge,



which, under the influence of any exciting cause, may become aggravated, and thus transmit the disease to persons having connexion with her," is a good form.

The Prognosis of a simple blennorrhagia of the *vulva* is not serious, except in a case of the occurrence of complications which abscess or fistula might give rise to.

In *urethral blennorrhagia* the cure is usually rapid. 'The disease does not last so long as in the male.

The *vaginal blennorrhagia* is usually the more difficult to cure, in proportion as the complaint is of old standing. When the disease has extended itself to the posterior portion of the vagina, it is next to impossible to cure ; like the uterine blennorrhagia, it is relieved for the moment only, becoming aggravated at the time of menstruation, and is thus interminable. In this last form women generally are barren, for masses of thick, ropy mucus block up the *os uteri*, and prevent fecundation.

Treatment.—With reference to the prevention of the disease, we have nothing to add to what we stated under this head when speaking of blennorrhagia in the male. In referring to the curative treatment, we shall divide it into the abortive, and the treatment of the acute and chronic stage.

Here, as elsewhere, the *abortive* treatment should be employed ; but women seldom apply in time ; the medical man is never consulted during the first few days : this may be attributed to their modesty, or to a cause which (were I not afraid of maligning the sex) I should attribute to that unaccountable, but no less true statement—want of cleanliness with respect to the genital organs.

In the treatment of the *acute stage* of blennorrhagia of the vulva, great benefit may be derived from warm lotions, containing opium or belladonna. If excoriations similar to those found in balanitis are present, the surgeon will find great benefit from cauterizing the surface, and keeping dry lint between the diseased parts. If no excoriations are present, dry lint alone will usually suffice.

When the acute stage has passed, astringent injections may be had recourse to with advantage.

Blennorrhagia of the urethra, as it resembles that in the male, requires a similar treatment.

Blennorrhagia in the vagina.—In addition to the ordinary antiphlogistic remedies, it is particularly important to use frequent injections, in order to remove all matter which may stagnate and produce a great source of irritation. These injections are best employed when the

patient is in a warm bath. In cases where pain is felt, injections should not be persisted in. Further benefit may, however, be derived from injections—namely, as astringents. To this effect, the patient should be placed on a bed, the hips raised, and then the injection should be pushed gently, and allowed to remain. The tube of the syringe should be of an elastic substance. When the case is complicated with a granular state of the mucous membrane, a ball of lint, moistened with various substances, may be employed, attached by means of a thread which passes out of the vulva, to enable the patient to withdraw it at will. However, the greatest advantage is usually to be derived from slightly touching the parts over with the nitrate of silver. An augmented secretion usually follows this treatment, but soon ceases, and a cure takes place. Injections of nitrate of silver may be employed, but not with the same advantage as the solid substance. When it is impracticable to introduce the speculum, benefit may still be derived from the application of the solid stick of nitrate of silver. In other cases we may derive great benefit from plugging the vagina with dry lint, which should be changed twice a day.

Blennorrhagia of the uterus.—In the acute stage of the disease, injections into the uterus are dangerous; leeches, likewise, should never be employed, or placed on the neck of that organ, as has been recommended: when placed on the groin, or opposite the spine, they have as good an effect, and they do not here cause inflammation, or produce virulent sores on the os uteri. In the chronic state, injections of nitrate of silver may be used (two grains to the ounce), and the quantity has been augmented to ten grains. This substance has succeeded better than any other.

Since my return to England, my late master (M. Vidal de Cassis) has called the particular attention of the profession to the subject of injections into the uterus; and as I witnessed many of the cases treated in this manner, I may be allowed to subjoin my own opinion upon the subject, and make a few practical observations which I hope will be found interesting. It is certain that, if fluids be injected into the uterus in abundance, and with considerable force, on the dead subject, some portion of the liquid *may* pass into the peritonæum; this result, however, is by no means certain. When injections are employed on the female during life, some practitioners believe that these same consequences ensue. Such is not, however, my own opinion. I have injected the uterus many times, when at the Female Venereal Hospital, with the happiest results, and have no reason to believe that fluid ever got into the peritonæum; immediately after the opera-

tion, the patient has occasionally complained of colic and pain in the loins ; these symptoms usually disappear in a few hours by warm fomentations, therefore I have had no cause to reject on this account a treatment which has the advantage of curing a very obstinate affection. There are, however, some precautions necessary to be taken. A long tube is to be introduced into the os uteri, and a syringe containing a very small quantity of the solution may be firmly attached to it, and the fluid should be pushed on with but little violence ; for it must be borne in mind that the cavity of the unimpregnated uterus is very small, and that large quantities of fluid forcibly impelled might possibly pass into the fallopian tubes, and thus escape into the cavity of the peritonæum—consequences not very probable, but which might give rise to very unpleasant circumstances.

Treatment of the complications.—Retention of urine rarely occurs in the female ; it may, however, demand the use of the catheter.

In inflammation of the neck of the bladder, or in cystitis, the usual antiphlogistic means should be used, and great benefit is derived from cold clysters containing laudanum. When the complaint has resisted this treatment, the mucous membrane may be rubbed over slightly with nitrate of silver, by means of the instrument of Lallemand. In the male we have seen this treatment followed by success.

Vegetations should be destroyed by excision when possible, but they are very liable to return.

Stricture, from the nature of the female genital organs, is very rare ; perhaps it does not occur once in ten thousand cases.

When *abscesses* form in the nymphæ, they should at once be opened by large and free incisions, which ought to comprise the whole length and depth of the tissues, and cysts should be removed.

Cases of fistulæ, which arise previous to the surgeon having been consulted, or which occur in consequence of bad management, must be treated on general principles. Thus, the first object to be attained is to keep the sides of the fistula in contact, and this may often be attained (provided the fistula be recent) by means of position and pressure. At a later period, when the fistulous opening is lined with an organized false membrane, the solid nitrate of silver may be used in order to destroy the false membrane and produce an eschar ; when this fails, pressure should be used on the sides of the fistula. The nitrate of silver may be often replaced with advantage by the nitric acid, particularly when the sides are indurated, or by means of the *uretome* the callous structure may be incised. Unfortunately, cases

present themselves which resist all treatment, and it only remains for the surgeon to recommend cleanliness.

In the œdematos state of the vulva, which we have previously spoken of, instantaneous relief will be procured by dividing the part which may be supposed to form the stricture.

Bubo must be treated as in the male.

Chancres require the same treatment here as when they occur in other parts. We refer our readers to that subject.

The treatment of the various nervous and other complications which occur in uterine blennorrhagia must be conducted on general principles ; but the cure of the local disease will often cause them to disappear.

Ovaritis must be treated by our most powerful antiphlogistic remedies, otherwise abscesses will form and open either into the vagina, peritonæum, or rectum.

CHAPTER IV.

FORMS OF BLENNORRHAGIA COMMON TO BOTH SEXES.

HAVING now described the forms of blennorrhagia which are peculiar to either sex, we come, according to the plan we have above laid down, to speak of those forms which are common to the male and female. In the first rank stands *blennorrhagic ophthalmia*.

SECTION I.

BLENNORRHAGIC OPHTHALMIA.

BLENNORRHAGIC OPHTHALMIA, or what in England is usually termed *gonorrhœal ophthalmia*, is not unfrequently seen ; yet it is a rare affection, in proportion to the vast number of cases of blennorrhagia which we have witnessed. Its exact situation is pretty regular :

thus it usually occupies the palpebral surface of the conjunctiva, or the ocular surface may alone be diseased ; however, we most frequently find them both affected at the same time. The follicles at the commencement may be the seat of the complaint, or the substance of the conjunctiva, or the sub-mucous cellular tissue. Usually one eye is affected only at a time ; but, in new-born children, both are not unfrequently seen in a morbid condition.

Causes.—On this subject there is much difference of opinion, and at the present day two doctrines divide the medical world ; one class of practitioners insisting that the disease is a consequence of sympathy ; another class asserting that it results from the blennorrhagic pus coming in direct contact with the conjunctiva. The supporters of this last opinion reject altogether the doctrine of sympathy ; on the contrary, the advocates of the first doctrine admit that blennorrhagic ophthalmia may be produced by direct contact.

We shall now consider these opposite opinions, and first of sympathy.

The authors who take this view of the subject consider that the affection depends upon a sudden suppression of a blennorrhagia, which, not knowing what to do with itself, passes by sympathy to the eye.

Such persons have assumed two things as proved which we can not allow : First, that the discharge is suddenly driven into the system ; secondly, that there exists a sympathy between the eye and the urethra, vagina, &c. Observation proves, constantly, that the blennorrhagia of the genital organs continues, and is not checked at the time the ophthalmia breaks out ; therefore there is no metastasis. There are no proofs, either, of sympathy between the eye and the urethra ; we have stated that it is a rare affection in comparison to the number of cases of blennorrhagia ; if it were a sympathetic affection, we should expect it to occur much more frequently.

Another reason which makes us believe that it is not a sympathetic affection is, that in women it is a much rarer affection than in men ; now, sympathy is usually supposed to act more powerfully in the former class, or at least equally so.

One eye only is affected at a time in by far the majority of cases : how can sympathy explain this ? why does one eye sympathize more than the other with the genital organs ?

These, then, form the reasons which oblige us to reject the doctrine that blennorrhagic ophthalmia is a consequence of metastasis or sympathy.

We advocate the second opinion, viz., that direct contact of the blennorrhagic discharge is the cause of the ophthalmia, for the following reasons: Observation clearly points out that matter directly applied to the conjunctiva will and can produce the ophthalmia; we are well aware that it is not always possible to trace the disease to direct contact, but are we consequently to reject the doctrine, and conclude that none has taken place, simply because we have not traced it? Certain circumstances, such as the *temperature* or *humidity* of the air, influence considerably the disease, rendering infection more probable, and aggravating the complaint.

Age likewise has its predisposing effect: thus, children born of parents laboring under a blennorrhagic discharge are very liable to become infected, in consequence of direct introduction of the matter, and both eyes are usually equally affected. The period of infancy passed, all ages are equally liable.

Sex, as we have above stated, has a marked influence in predisposing individuals. The male is, in a tenfold degree, more liable than the female; the reason is simple. In making water, the man is obliged to handle the penis; curiosity also makes him wish to examine the state of the discharge frequently; thus his hands become soiled with the purulent secretion, which may easily come in contact with the eye.

In woman, however, the contrary happens; her fingers are rarely soiled, for she is lamentably neglectful of the ordinary duties of cleanliness. When one eye is affected, the probability of the other becoming so likewise will depend upon whether the patient lies on the same side or not, thus favoring the discharge to come in contact with the sound organ. It will be rendered still less probable when the bridge of the nose is high, for the same reasons.

Symptoms.—At the commencement, the symptoms are similar to those found in common ophthalmia; the patient feels as if a foreign body intervened between the body and the lid. Should the surgeon be called upon to examine the eye at this period, he will find that the lower eyelid is first attacked; it is redder than usual, and presents a flocculent, red appearance; the disease does not remain, however, long confined to this spot, but spreads over the whole surface of the conjunctiva; there is considerable lacrymation, followed speedily by a muco-purulent discharge, which soon assumes a purulent character; the follicles participate in the disease; the mucous membrane assumes a granular appearance, and a sanguineous discharge, or even pure blood, appears on the surface.

The secretions now form crusts around the lids, and are often so acrid that they excoriate the cheek and parts which they come in contact with ; it, however, does not produce any effect on being inoculated.

Granulations are so common in this affection, that it has been called granular ophthalmia ; this proves that the inflammation has gained the body of the mucous membrane. The symptoms do not, however, stop here ; œdema of the lids takes place to such an extent that the patient loses all power of opening them, and they remain permanently closed, causing the secretions to be shut up, as in case of abscess. The upper lid, allowing of a greater distension than the lower, covers it, and trichiasis often results ; œdema of the cellular tissue of the conjunctiva occurs, and chemosis follows ; thus the cornea is surrounded with a mass of œdematosus infiltration. Should phlegmonous inflammation occur, an induration will follow in consequence of lymph being thrown out.

The other parts of the eye become successively attacked ; intolerance of light follows ; the cornea becomes clouded, ulcerates, and hypopium succeeds. The ulceration may result from the mere mechanical effect of the pus, which by its acrid qualities macerates or softens the cornea ; or it may ulcerate, from the circulation being interrupted ; hence, destruction of the parts follows from insufficient nutrition.

These unfavorable symptoms follow one another so rapidly, that in twenty-four hours the eye may be lost. When the disease has existed five days, and the use of the organ is preserved, the surgeon may hope to save it. When the acute stage has passed, the affection may terminate either by resolution, which gradually occurs, leaving a considerable hardness, or cicatrices of the cornea may result, or the iris may become adherent, or be covered with false membranes.

Delitescence is a very rare termination.

Diagnosis.—In this point of view it is impossible, by any of the signs taken singly, to satisfy one's self of the existence of an ophthalmia which is the direct effect of gonorrhœa or blennorrhagia. We have before observed that the granular state of the mucous membrane does not prove the specific nature of the complaint, but shows only that the body of the membrane is the seat of the disease.

The *intensity* of this form has been considered as a characteristic symptom, but the practitioner will find he can not depend solely on it, as other forms of ophthalmia have this sign in common.

The *coincidence* of *blennorrhagia* is not conclusive, for any individual may become affected with ophthalmia independently of gonorrhœa ; the latter complaint does not prevent him from being affected with a simple conjunctivitis ; when it occurs, however, it is a sign of importance, but not an unequivocal symptom of a specific disease.

However, the coexistence of blennorrhagia of some of the mucous membranes, great intensity of the complaint, together with a granular appearance of the mucous membranes, will usually be sufficient evidence that the disease is blennorrhagic ophthalmia. In moist, damp weather, the surgeon should be on the alert to treat actively inflammation of the eyes in persons laboring under blennorrhagic affections.

There is still another question which we should not leave unnoticed. How can we diagnose a virulent from a mild blennorrhagic ophthalmia ? We positively affirm that no case has ever been shown us which we could call virulent ; we have inoculated, but no pustule has been produced, and we are not aware of authors having cited causes of it ; we therefore believe that there is no virulent form, strictly so called.

Prognosis.—There is no form of ophthalmia, the prognosis of which is more unfavorable than the one we are describing ; consequently, when the surgeon has a case to treat, he should never take the whole responsibility upon himself ; the patient only observes the slight redness, and if in twenty-four hours the organ is lost, his treatment will be blamed ; a second opinion should, therefore, be called in.

“ To give an idea of the unfavorable nature of the prognosis,” says M. Ricord, “ when I was Dupuytren’s *interne*, that distinguished professor never had a case that was perfectly cured, or a patient that recovered his sight completely when once attacked with this complaint, and yet it was not from the fear of taking blood, for six or eight bleedings were ordered in as many days.”

Treatment.—To use the words of Lisfranc, in one of his clinical lectures, “ you should tumble upon this complaint, the arm bent, and the mind firmly convinced that it is better for your patient to run the risk of losing all his force than his eye, for one can be recovered, the other is irremediable.” But it is at the commencement that we may hope to be of the greatest service : on the first appearance of redness, let leeches be applied to the temples, and the mastoid process, and let the patient be briskly purged. Should general inflammatory symp-

toms be present, general bleeding may be called for. Without waiting, however, to allow the disease to gain ground and correct his diagnosis, the surgeon should at once employ the nitrate of silver in substance, not with the intention of its acting like a caustic, but simply to change the character of inflammation ; for, as we have frequently had occasion to observe, this substance is endowed with anti-phlogistic properties. To apply it properly, the eyelids should be everted, and then the solid stick of nitrate of silver should be rapidly passed over the surface, so as to whiten it slightly ; immediately inject cold water under the eyelids, and by this means the nitrate of silver will not touch the cornea.

This treatment should be accompanied by that above mentioned, together with poppy-head fomentations, and great relief may be derived from belladonna placed in the nostril of the affected side.

At a later period the surgeon will do well to prescribe a seton in the neck ; by such means nature seems as if taken by surprise, and frequently the eye is at once relieved.

The patient's head should be raised and turned to the affected side, to prevent the secretion coming in contact with the sound organ.

When chemosis is present, the surgeon should not hesitate to cauterize it, or, in case of that treatment not succeeding, he may readily, by means of scissors, cut off the swollen and œdematos cellular tissue. This will tend materially to unload the vessels of the part.

When the chemosis is indurated, cauterization may be tried ; when, however, the circulation of the cornea is interfered with, the surgeon will do well to scarify it (the chemosis), as recommended by Scarpa.

Supposing that the first cauterization does not succeed, it is by no means a reason for discontinuing it ; in its reapplication, the surgeon should bear in mind the following rules : Cauterization is usually succeeded by a sanguinolent secretion ; this lasts some few hours ; if, at the end of that time, it does not return to its purulent state, if the eye becomes redder than before, the surgeon may with advantage reapply the caustic. M. Ricord has reapplied it four or five times under these circumstances. When, however, the secretion becomes purulent, and then serous, and the other symptoms of inflammation abate, no further application of the caustic is required ; it is now worse than useless, and will tend only to excite the inflammation afresh.

This constitutes the treatment which we have seen employed with the greatest success ; we shall not, however, quit the subject

without saying a few words on some other remedies which have been used.

M. Ricord is opposed to the use of mercury, as it often causes salivation ; for, although the ptyalism might act as a counter-irritant, it is too near the seat of the affection, and causes only another disease, instead of curing one. Our opinion, from what we have seen of mercury in other affections of the eye, &c., differs greatly from that of our learned master, and in spite of his objections, we should feel called upon to use it in certain cases, and under certain restrictions. As regards the propriety of reproducing the original blennorrhagia, we have nothing further to add to what we stated in our general observations on blennorrhagia, except to repeat that, though recommended by Baron Boyer, it is very dangerous, and does not produce the results he anticipates.

SECTION II.

BLENNORRHAGIA IN THE ANUS.

IT may be asked, Is there such a disease as this ? We answer, Yes. Nevertheless, it is very rare ; but in large hospitals, set apart for diseases of the genital organs, it is occasionally met with. We have seen some cases—one *lately*, which was clearly proved, as a police officer was witness of the unnatural crime, and the boy entered the hospital suffering greatly from blennorrhagia of the rectum, and presented the following symptoms. How far it may be common, it is not here for us to decide, but as a consequence of direct infection we believe it an unfrequent disease ; the error of thinking it so depends upon the following circumstance. A secondary symptom, which we call mucous tubercle, and which very often follows an indurated chancre, is very common in the hospital : we have given a very good plate of it. (See Plate V., fig. 4, and Pl. 7.)

Hence M. Ricord interrogates the patient on this score, and examines the anus frequently. Now, as the mucous tubercle gives rise frequently to a discharge, a superficial observer might suppose that the disease has been contracted by direct contact, particularly when the tubercles are ulcerated. After a careful examination of these

cases, and after inoculation of the secretion, &c., we have satisfied ourselves that we have only had to treat a secondary symptom.

The symptoms of blennorrhagia of the anus are but slightly alluded to by authors, and yet they are of great importance, more especially in medico-legal inquiries, as we have more than once stated.

Symptoms.—Pain and difficulty in going to stool usually accompany the disease; however, such symptoms exist equally in haemorrhoids and other affections of the rectum; a discharge from the gut takes place, resembling that from the urethra. The lesions of the intestines may be similar to those we described in speaking of the vagina, and the pain is very often intense, in consequence of the faecal matter passing over the excoriated and inflamed gut, thus forming a severe complication; chancres may occur, which, if accompanied, as they sometimes are, by a spasmodic action of the intestine, render defecation very difficult, or even impossible.

The disease may assume either a chronic or acute character. When acute, the circumstances and complications render it very severe; when it takes on the chronic form, the position and difficulty of local treatment render the cure very tedious. *Buboës* seldom follow, but abscess at the margin of the anus is not unfrequent; it does not, however, necessarily form a communication with the intestine, though fissures of the rectum may frequently result.

The affection is usually seated just within the sphincter, and does not extend beyond the second curvature of the rectum.

The cause is, as we have stated above, the effect of direct contact of the blennorrhagic secretion; it can not be produced by swallowing the secretion, as some authors have pretended. The other general causes of blennorrhagia might give rise to the disease, but seldom do so.

Diagnosis.—This is by no means easy, for we occasionally see blennorrhoid discharges from the rectum, and to distinguish such from blennorrhagia is usually impossible. Notwithstanding, the medical man is sometimes called upon to give evidence; it is therefore of the greatest importance that he fully understand this subject, as the life and reputation of several individuals may depend upon his opinion; and for these reasons we purpose examining some of the signs which have been given in books.

M. Cullerier, one of the surgeons of the Venereal hospital, states, in an article he has written on this subject, that an opinion may be formed from the funnel-shaped appearance of the rectum. The case which we lately saw proved completely that this funnel-shaped ap-

pearance of the anus does not necessarily follow the commission of an unnatural crime ; no such appearance was there present.

Those who have dissected phthisical patients must be likewise aware that this appearance will be often found, as it depends upon the absorption of the fat ; an inflammatory affection may cause a swelling of the parts around the anus, and give the opening a funnel-shaped appearance ; hence, then, we infer that the crime may have been committed without this pretended sign being present ; and if it does exist, there is no reason to suppose that the crime has been perpetrated. Our readers will, therefore, appreciate the value of such a symptom.

The color of the discharge has been cited as assisting the diagnosis ; but taken alone this is of no use, for it gives the surgeon no information as to the cause.

In simple blennorrhagia of the rectum inoculation affords no assistance ; if, however, chancre be present, inoculation will then satisfactorily prove that the complaint has been caught in an unnatural manner. The occurrence of buboes will not assist the diagnosis, as some have supposed ; observation clearly shows that they are often produced by simple irritation.

The antecedents of the patient seldom aid the diagnosis, as he rarely acknowledges that he has been guilty of such a crime.

In fine, when no chancre exists, there is no one unequivocal sign that the complaint, which the surgeon is called to pronounce upon, depends on a disease contracted in unnatural connexion ; there is, however, a circumstance on which M. Ricord lays great stress ; we refer to a rent or tearing of the margin opposite the *coccyx* and *perineum*, which he has never found in persons unaccustomed to the crime. He further states, when this condition has been observed, that the patients, on being pressed, have avowed and confessed the manner in which the disease had been contracted.

Prognosis.—This must be always unfavorable, as, during the acute stage, the passage of the fæces irritates the membrane, and may give rise to abscesses. In the chronic stage, if the disease have reached the deep parts of the rectum, we can have no hopes of speedily curing it, as it is difficult to apply local treatment.

Treatment.—The first indication we have to fulfil is to empty the rectum, and to prevent constipation as much as possible ; this is best done by lavements. When, however, fissures of the rectum exist, the introduction of the clyster-pipe is difficult, and should not be continued ; laxatives only should be used. Cubebs and copaiba are not

only useless, but highly prejudicial, as they tend to irritate the rectum, and have no effect in checking the discharge.

The direct means consist in keeping the parts perfectly clean, in employing injections of nitrate of silver of the usual strength, and, in some cases, advantage may be derived from the use of the tent.

SECTION III.

BLENNORRHAGIA OF THE MOUTH, NOSE, AND EARS.

M. RICORD, in his immense practice, has never seen any disease or discharge which could be classed under this head ; he is therefore disposed to treat such descriptions as fabulous, and to attribute them to simple catarrhal affections.

In the umbilicus, and in the fold of the groin, discharges may appear as the consequence of dirt, or the development of mucous tubercles ; the treatment must, of course, be founded on general principles and consideration of the cause.

SECTION IV.

VEGETATIONS.

UNDER the general term of non-virulent affections I place vegetations, which, though not necessarily, are frequently a consequence of sexual intercourse, and must therefore be considered. Vegetations are generally designated by the terms, *warts, cauliflower excrescences, cockscombs, &c.* (Pl. VI.)

Pathology.—In color vegetations differ considerably ; sometimes they are of a very vivid red or scarlet ; this happens particularly when they are seated on the glans penis at the entrance of the urethra in the male or female, on the inner margin of a narrow prepuce, and, generally speaking, when they are not constantly exposed to the air. When seated on the skin they are much paler, and by exposure become even quite black.

Their consistence and sensibility differ considerably : they may be quite horny, very little if at all sensible, and quite dry ; or they may

be moist, secreting a dirty and offensive fluid, flaccid, and sensible to the ordinary stimuli.

Sometimes they are attached to the skin by a sort of pedicle ; at others, they have a broad base, and are flattened. In number and size the same variety occurs ; we meet often with one or two, very small and pointed ; in other instances, the male or female organs may be completely covered with them. They are more frequently situated on the mucous membrane than on the skin, although they are met with on the thighs ; still, however, they are found on those parts of the skin which are more closely allied to mucous membrane. Their growth depends apparently on the little pressure and the moisture which surround them ; for, if pressure be made, and if artificial means be employed to keep the parts dry, their growth is retarded.

Their structure is very peculiar : a cluster of vegetations is composed of a number of granular bodies connected by a common base ; the size of the granules differs greatly, usually that of a small pin's head ; these granulations are more or less conical ; when not compressed, they are covered by epidermis or epithelium, which often becomes horny in exposed situations ; if a section be made of this cluster, it seems to consist of an hypertrophied dermis, which is much thicker here than elsewhere. Some authors believe vegetations to consist of the papillæ of the skin, which from some cause are hypertrophied, and lift up the epidermis covering them. Others believe them to depend upon an hypertrophy of the crypts, which form the exhalents on the skin, having assumed a conical appearance. Whatever views my readers may have upon the subject, let them be assured that their origin is deeper than is imagined ; hence arises the difficulty of removing them, and the necessity of taking certain precautions if we wish to cure them radically. They are plentifully supplied with blood-vessels, bleeding freely when cut ; their sensibility differs greatly ; in some cases vegetations are nearly destitute of sensation ; when they have been much irritated, they become exceedingly sensitive, and the secretion they give rise to seems to increase that sensibility.

The causes appear to arise from irritation ; some persons believe them to be the consequence of venereal disease, and pretend to speak of syphilitic vegetations as distinguished from others. Observation leads me to the following conclusions : Any secretion which will occasion irritation of a surface for a prolonged period may produce vegetations. We have often seen them in boys and adults affected with natural phymosis, or who pay no attention to cleanliness ; in such

cases, it is the secretion of the glandulæ odoriferae which produce the disease, for connexion has never been indulged in. Sir A. Cooper, in his valuable Lectures on Surgery, states two causes which prove that the secretion of warts is contagious, and he does not think that the blood of these bodies can become the infectious agent. I have met with similar cases, but I am not prepared to say that the matter they secrete is of any peculiar property, acting otherwise than as a simple irritant, which, as I have said, is alone sufficient to produce warts.

In females they depend upon gonorrhœa or irritating discharges ; the secretion of chancres often produces them, not, I believe, in virtue of any specific action, but from its irritating qualities, and modern authors no longer consider them a secondary symptom. It is of no great importance in medical jurisprudence that these points should be properly appreciated. I may here mention an instance. A late *interne* at St. Louis' hospital was shown a child with these vegetations completely encircling the genital organs, which he instantly pronounced to be syphilitic ; and the mother immediately suspected an old man who was in the habit of playing with the child, who lived in the same house with her ; and the answers of the child appeared to corroborate these suspicions, or they were (as often happens) tortured into an acknowledgment. The authorities were apprized, but did not think it necessary to take any measures. I examined the child, and found that the vegetations existed in great numbers, of a dark and horny consistence ; there was a considerable quantity of serous discharge from the vagina. The child was puny, lymphatic ; and I could detect no marks of violence on its person. This circumstance induced me to tell the *interne* that he had come rather hastily to a conclusion on the nature of the vegetations. Their pale, horny, dark character showed that they had existed a long time, notwithstanding any statement of the mother, who seemed at all risks to tax the old man with rape.

The discharge from the vagina, as I assured him, was often present in scrofulous children ; it existed in this instance, and its serous character showed that it did not depend upon recent infection. Now these appearances did not tally with the commission of rape, or the idea of infection contracted a few days before. I believed the man innocent ; and I mention the case here, as the circumstances which attend it are peculiar, and I believe it be an instructive one.

Complications.—Vegetations may exist alone, or be complicated with a variety of other affections : in the female we often find dis-

charges which produce, keep up, and aggravate the complaint. Excoriation of the surrounding tissues is often likewise a complication. Ulcerations, both of a simple and specific nature, frequently attend the complaint, and render it more difficult of cure. But by far the most frequent in the London hospitals is condylomata, and hence these two affections are often confounded together, and attributed to the same cause. In the female, the situation of vegetations often gives rise to a complication, particularly when they are of a very vascular kind and occupy the meatus, causing that affection which has been described by Sir C. M. Clarke and Sir B. Brodie. In the male, vegetations co-exist with balanitis, chancres, paraphymosis, phymosis, complications which are often severer than the original affection, and which it is necessary to remedy previous to treating the vegetations.

The *diagnosis* of vegetations is generally easy; there is, however, one affection with which they may be confounded; I allude to *condylomata*. The practised eye will, in such cases, however, rarely be deceived. The former affection is pedunculated, the granules small, covered with epidermis; their color is florid. The history of the case, and the existence of some irritation, help the diagnosis.

In the latter affection the bases of the condylomata are large, the granular patch is flat, apparently destitute of epidermis, and covered with a whitish or yellow secretion, rarely occurring without other traces of secondary symptoms, probably the patchy excoriation of the tonsils, or a papular eruption on the body.

When vegetations and condylomata occur together, the local characters I have above mentioned aid the diagnosis.

The *prognosis* is favorable, although the patient should be made aware that, when destroyed, vegetations are very liable to recur. If not removed, however, they may create great local irritation, and produce very intractable sores, although possessing nothing specific. In some few cases I have witnessed, when vegetations are very extensive, no sooner does the surgeon get rid of one crop than another appears; the disease is hydra-headed; but under the treatment which I shall immediately recommend, this rarely occurs.

Treatment.—When these bodies are few in number, it is only necessary to remove the cause which keeps up the irritation, and they will disappear of themselves. Ablution with tepid water, or an astringent wash, will often suffice, provided dry lint be used to prevent the vegetations coming in contact with one another. They shrivel up and soon fall away, and are not reproduced. In such

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cases as these, any dry powder may be employed, and, as far as my experience goes, the simpler it is the better; and I should recommend hair-powder in preference to those stimulating ones in use, which, however, are not without their danger. I have often had occasion to witness vegetations surrounded with a hard crust composed of some powder mixed with the secretion, and producing an augmentation of suffering; hence I do not recommend them. When the patient will submit to the use of instruments, nothing succeeds so well as excision of the vegetations with a pair of curved scissors, taking care to cut them as close as possible to their roots. The incised parts bleed freely; but this should not deter the surgeon from cutting off as many as possible, placing dry lint upon them when the bleeding has ceased; the coagula and lint should be removed by the use of the warm bath, and the greatest attention paid to cleanliness, at the same time that means should be taken to check any discharge which may run over the affected part. If powders be used, the part should be carefully washed and dried previous to any more powder being applied. When these means fail, caustics may be employed, but the surgeon will find them very ineffectual compared to the other means. Nitrate of silver produces but little effect; its action is superficial, and it forms a hard cake on the vegetation, which is irritating and does not fall off for some days, when the vegetations are often as large as before. The caustic potash is a very unmanageable preparation; it extends further than is wished, and the black and decomposed substance is very irritating. However, as an adjunct to excision, the employment of the solid nitrate of silver is beneficial; but the surgeon should not employ it to the bleeding surfaces: when the excised parts have ceased to pour out blood, and the part is washed, let the stick of nitrate of silver be applied to the centre, and the vegetations will not reappear. General means are of no benefit, unless they tend to check any discharge which keeps up the irritation.

SECTION V.

HERPES PRÆPUTIALIS.

AMONG non-virulent affections is a complaint which pathologists have agreed to call herpes præputialis. Willan and Bateman have

classed it among vesicular diseases. It commences by a cluster of small vesicles, seated on a patch of inflamed skin : the vesicles may become ruptured, and the secretion of the part may cause ulceration, and little sores are thus produced. The reader who is not familiar with this disease, will gain a very good idea of its characters by examining Plate III., fig. 3 : the affection is there seen in all its stages. I think I can not do better than extract the following case from my note-book, together with the observations which I made upon it, as they comprehend whatever is known upon the disease.

August 15, 1839.—My friend Dr. Fisher, of the Place Vendome, directed A. G—— to call upon me, and ask my opinion upon a sore on the penis, this morning. On the prepuce and glans there are several ulcerations presenting the following appearance : one is a small distinct ulcer, covered with a whitish secretion, the base is red, and gradually lost in the surrounding tissue ; close to it is a distinct vesicle filled with a limpid fluid ; there are various others, which more or less resemble the two spoken of.

On the right buttock there is a patch of vesicles of the size of a five-shilling piece, the base of each being as large as a pin's head ; some are filled with a serous, others with a yellowish fluid.

Close to the anus is another patch, which is completely covered with a yellowish crust, such as is seen on the face of children.

The *History* the patient gives of himself is the following : he left England in consequence of bad health and indigestion, and is now returning from Geneva. On Thursday last, the 8th instant, having been three days in a diligence, he felt a singular pricking near the anus, and at that period the sore on the penis first appeared, but has made no progress since. Being interrogated on the subject of exposure to contagion, he states that he has not had connexion more than twice, the last one dated two years back. As to the probability of having contracted it on a water-closet, he states that he did sit down on one which was very dirty, a short time since. He adds, that had he reason to attribute the affection to contagion, he would willingly avow it, having no motive for concealing the truth.

On again questioning him, he states that he is very subject to indigestion and to eruptions ; lately he has been particularly inattentive to diet, eating at a *table d'hôte*, &c.

Such is the history of the case given by a very intelligent young man, who can have no reason for concealing anything, as he is very anxious to pursue his journey. He naturally asked me for an opinion on the sore, and this leads me to consider the *diagnosis*. The

circumstance of an ulceration on the *penis*, presenting the *characters* above noticed, in a young man of twenty, is very strong *prima facie* evidence that a chancre exists; but we are aware that the presence of a sore on the penis does not prove that it is a chancre, for *other* sores may appear on the penis, and chancres may appear on *any part* of the body.

As to the characters of chancres, we have stated them to be those attending other ulcerations, and that other sores may put on the character of chancre. In young men, suspicion is excited because they are more exposed; but any age is necessarily liable. Thus, then, as far as we have yet seen, the present case has as many circumstances for supposing it to be one of chancre as not.

Now if it be not a chancre, what is it? The prepuce is liable to other vesicular diseases. Thus, in addition to chancre, eczema and herpes præputialis are not unfrequently seen on that part. Can the present complaint be any of these? It presents a vesicle of a considerable size, seated on an elevated patch: these, we see at once, are not the characters of eczema, for by referring to this latter affection it will be found that eczema presents a very *small* vesicle, in *great* quantities, thickly and *irregularly* sprinkled over an inflamed and reddened skin. Herpes præputialis, like herpes labialis, usually appears in distinct patches of about some ten or twelve large vesicles on a red base, which, at the end of a few days, fade away and dry up of themselves, or, if the irritation continue, form little ulcers. They generally depend, not upon local irritation, but upon disorder of the digestive organs; on the contrary, eczema usually accompanies, and is produced by, local irritation.

So far, then, it will at once be perceived that we are in doubt whether this case be due to a specific cause or not. If it be a simple affection of the skin, it can be only herpes præputialis, and we exclude eczema, and come to the conclusion that it is either a chancre or herpes.

As to the probability of its being a chancre, we should add, that our patient has not been exposed to contagion, and unless we allow that a chancre arise *spontaneously*, the present case does not depend upon a specific contagion.

Is it probable that the present case is an herpetic affection? We find on studying herpes, on the lips and prepuce, that it is usually preceded by general disturbance of the digestive organs; that it occurs in persons possessing a delicate skin, and such as are subject

to skin diseases ; that it never exists except in patches, and that these patches may be numerous.

Now these circumstances are all present in the case before us : the vesicles are not only present on the penis, but likewise on the buttocks, where there has never been an abrasion of surface ; hence inoculation could not have acted here, although it may on the sound surface of the mucous membrane.

For these reasons, then, we have diagnosed the case to be one of herpes præputialis, which from the moisture of the part has ulcerated.

The *prognosis* is favorable, inasmuch as the course of an herpetic affection, when properly treated, is excessively simple ; we therefore gave our patient *every reason* to suppose that he would be perfectly well in a few days.

The *treatment* we recommended, was particular attention to diet, advising him to live upon milk and vegetables, with meat and wine in moderation, avoiding all heating dishes. We prescribed aperients and bitters, and a local application of lint dipped in aromatic wine.

August 18. This patient left Paris quite well.

SECTION VI.

ECZEMA.

THE surgeon is occasionally consulted on account of a severe affection of the genital organs which pathologists call eczema. This disease is generally spoken of only in treatises on skin diseases ; however, as it occasionally is a consequence of sexual intercourse, I have thought proper to allude to it, and accompany the description with a plate which the reader will find in Plate IV., fig. 3.

Causes.—Eczema can generally be traced to the application of some irritating substance to the skin. In cases which we are about to treat of, the blennorrhagic discharge is the usual exciting cause, together with inattention to cleanliness : hence we very frequently witness cases of the affection in prostitutes. In men, however, who work in a business where much powder or dust is disengaged, this affection of the genital organs is not uncommon, and of course quite independent of any venereal complaint. The surgeon should not forget that mere friction of the trousers will produce it ; by itself it

is no sign of venereal disease. I have found it more frequently in persons who have red or auburn hair than in other individuals.

Symptoms.—Eczema is characterized at its commencement by a feeling of itching, heat, and redness ; the parts become swollen, and these symptoms are followed by an eruption of small vesicles scattered over the surface : when scratched, a serous fluid exudes, forming little scales on the skin, and increases the irritation. The disease may assume the chronic form ; in this state the drawing was taken : the skin is red and swollen ; the surface covered with the secretion above mentioned, which is hardened by exposure, and crevices are seen running between the little lamellæ : from these issues, at first, a clear, and in the more advanced stages a sero-purulent secretion, giving rise to larger and firmer scales, and the disease is then called *eczema impetiginodes*.

The *diagnosis* is easy, and does not require further allusion.

The *prognosis*, in simple cases, is favorable, but in the severer forms no prospect of an early or speedy cure can be given, as this affection is one of the most obstinate.

Treatment.—Great attention to cleanliness is frequently sufficient to cure the patient, at the same time that all exciting causes are carefully avoided. In the more advanced stages, local bleeding will be called for, and some emollient application, such as bran-water, goulard-water, poultices, particularly those made of potato-starch ; linseed-meal, by its rancidity, often exaggerates the complaint.

When these means fail, it may be found advantageous to stimulate the part by rubbing the organ with nitrate of silver, when all irritation has ceased, and employing dry lint to prevent friction.

SECTION VII.

EXCORIATIONS.

DEFINITION.—By the term excoriation, I here mean abrasion of the epidermis or epithelium, the result of sexual intercourse.

We meet, in practice, with some few individuals who can not indulge in sexual intercourse without being subject to excoriations ; such persons are not observed to have a particularly fine or clear skin : we have met with the affection in patients who on other parts of the body have a thicker cuticle than usual, and yet are very sub-

ject to abrasions in connexion. Excoriations, however, are more frequently met with in persons who naturally have a long and narrow prepuce, and pay little attention to cleanliness.

The number and position of excoriations differ greatly, but it is in the neighborhood of the frænum that they are most frequently seen, and they often occur upon the patches of the *glandulæ odoriferae* at the base of the glans penis. They may rapidly heal, or, if neglected, ulcerations may follow, and be kept up by the secretions of the part; these sores, as far as physical characters go, we are unable to distinguish from chancres, to which they bear a strong resemblance in situation, size, &c.

The treatment is the simplest possible: washing the penis several times in the day with a little goulard-water, and when dried placing a small strip of lint between the glans and prepuce, will rapidly cause these excoriations to heal. When this object is gained, the surgeon, to prevent a repetition of the annoyance, may recommend some astringent wash, and engage his patient to partially uncover the glands; by such means, together with strict attention to cleanliness, or washing the part daily with a little spirit, the abrasions of the skin will not reoccur, and the patient will be relieved from much annoyance and danger in promiscuous intercourse.

PART II.

SYPHILIS.

CHAPTER I.

PRIMARY SYMPTOMS.

In the introduction it has been stated that venereal diseases may be naturally distinguished into two orders : to the first of these I have already sufficiently directed the attention of my readers. There, however, remains the second division, no less important, if considered in relation to the primary symptoms it gives rise to, or to those general or constitutional results which modern surgeons believe to be a direct consequence of the primary.

This second order, the description of which will form the subject of this part, has been styled—

SYPHILIS.—Syphilis is a virulent affection, the essential character of which is its dependence upon a *special cause*, or a distinct *virus*.

The term *syphilis* is derived, according to Fallopius and Swediaur, from *συν*, with, and *φιλία*, love ; or, according to Bosquillon, from *σιφλος*, deformed or disgraceful ; other authors state that it is derived from *σύν*, hog, and *φιλεῖν*, to love.

Modern authors have subdivided syphilis, as above defined, into separate stages, and this arrangement I shall follow, believing it the most natural ; and I, moreover, consider it a plan fraught with the advantage of placing the symptoms which successively arise in a clear methodical manner before my readers.

The *first stage* includes *primary symptoms*, or the immediate effects of the *specific cause*, occurring on the spot where the special virus or virulent matter has been deposited. Example, chancre.

The *second stage* embraces *secondary symptoms*, which follow as a consequence of absorption of the virus ; these may be hereditary, but

are not capable of transmission by inoculation. Example, various affections of the skin and mucous membranes.

The *third stage* comprehends *tertiary symptoms*, which are not capable of being transmitted by inoculation, and are not hereditary, but manifest themselves by certain pathological alterations of the submucous and subcutaneous tissues, as well as morbid appearances in the fibrous and osseous structures.

We shall, in the present chapter, describe the first stage, or primary symptoms, commencing with chancre.

SECTION I.

CHANCRE.

Definition.—*Chancre* (says M. Ricord), or syphilitic ulcer, is a specific ulceration depending upon a special and identical cause, always similar in its nature, under whatever form it presents itself, and derived from an ulcer similar to itself, which it reproduces during a certain period of its existence, and which, constituting a local disease at its commencement, gives rise, under circumstances we can often appreciate, to symptoms of general poisoning, known by the term *secondary symptoms*.

Anatomical characters of chancre at its commencement.—The best means of studying these characters is to observe them in cases of artificial chancre produced by inoculation, as we can here examine them at our leisure. They are well delineated in Plate IV.

If the pus be taken from a chancre during its ulcerating period, and introduced, by means of a lancet, under the epidermis of the inner part of the thigh, or any other part of the body, the following results will be obtained.

During twenty-four hours succeeding the operation the inoculated point becomes red, fig. 1, *a*; in the course of the second and third days the surrounding parts are slightly swollen, and assume a papular appearance, or already traces of a vesicle are seen on the summit, fig. 1, *b, c*; on the third or fourth day a fluid, which is more or less transparent, is observed beneath the epidermis, and a distinct vesicle becomes apparent, where the papula previously existed, and a dark dot is seen in the centre, owing to the coagulation of the blood which had escaped through the puncture of the lancet, fig. 1, *c, d*; from the



g

h

a

b

c

d'

e



fourth to the fifth day the vesicle assumes a pustular character, and a distinct depression is seen in the centre, so that it represents very distinctly at this period the small-pox pustule, fig. 1, *d. e.* The red areola, which has been hitherto gradually augmenting in intensity, now as gradually fades away, and the cellular tissue, which was slightly œdematosus, becomes infiltrated with plastic lymph. On the sixth or seventh day the pustule is observed to be wrinkled, in consequence of the contents becoming thicker, and ultimately a crust takes the place of the pustule, fig. 1, *f, g.* If not interfered with, this crust assumes a conical appearance, increasing always at its base ; it ultimately falls off, leaving an ulcer seated on a slightly indurated base, in depth equal to the thickness of the skin : the bottom of the ulcer is covered with a whitish pulpy substance or false membrane, which adheres so firmly, that it is with difficulty wiped or washed off. The ulcer is generally circular, and appears as if made with a *punch*, fig. 1, *h.*

The margin, if viewed by means of a microscope, will be found dentated and covered with a secretion similar to that seen at the bottom of the ulcer. The border is slightly œdematosus, or indurated, and the areola around it of a browner tint than at the previous stages ; this œdematosus condition of the border occasions a slight eversion of the edges, and hence the ulcer may assume a somewhat infundibuliform appearance.*

The surgeon, however, must not expect that the course of every chancre he meets with in practice will be similar to this artificial sore. Observation teaches us that primary sores may commence in either of the following ways. The matter from an already infected individual may introduce itself into the follicles which exist in such numbers on the glans penis, and as the opening closes, little abscesses or pustules form, which then go through the stages mentioned in the preceding paragraph ; and a good idea of this form of chancre may be obtained from Pl. IV., fig. 2.

More frequently, however, the matter comes in contact with an abraded surface, together with mucus or some secretion which forms a sort of crust, and then the chancre is in the same condition as seen in Pl. IV., fig. 1, *g* ; provided no mucus be present, the abraded surface does not become dry, but presents the appearance seen in Plate

* Provided the patient keeps his bed, is in a good state of health, and commits no excesses of any kind, the course of a chancre produced in the artificial manner above-described will pass through these regular phases, but under opposite circumstances the artificial sore may take on any of the varieties hereafter to be mentioned.

IV., fig. 1. g. Chancres may commence in any of these ways, or the matter may be introduced under the epidermis or epithelium, by leech-bites, punctured wounds, &c.; they will then follow the course of follicular or artificial chancres. Lastly, the absorbents may carry the matter along a lymphatic vessel, cause the ulceration of it, or of a lymphatic gland, and thus the chancre appears as a little abscess in the course of the vessel, presenting, when the scale falls off, the appearance seen in Plate V., fig. 2.

If the pus of a chancre, such as we have described it, be examined by the microscope, it will be often found to contain animalcules, particularly the *vibrio lineola* of Müller. The experiments of M. Donné have likewise proved that it may present either alkaline or acid properties, circumstances depending upon its situation, &c.

It varies in consistence, but is usually of a thin, serous, and sanguineous character; however, the peculiar pathognomonic character of the pus is the action which it has on the animal economy when inoculated; for I may here state that no other secretion with which we are acquainted, or which I have seen employed, will produce similar effects.

This pus will produce no such specific effects on animals, notwithstanding all the attempts which M. Ricord and others have made to inoculate them; hence, as far as experiments can prove it, its effects seem to be confined to the human species.

Progress of Artificial Chancre.—If the sore be kept clean, it shows very little tendency to increase, and may remain a considerable time in *statu quo*, provided no excesses are committed; the disease has a very mild character, quite at variance with those symptoms usually attributed to it. Weeks may pass, and the chancre not be larger than a split pea, although the areola may become somewhat more livid.

The anatomical characters of the ulcerative period are not, however, always so simple as we have above described them; in consequence of circumstances to be mentioned hereafter, the chancre may assume various appearances, which are considered by M. Ricord sufficiently distinct and characteristic to deserve particular attention.

I shall consider these varieties under the following heads.

1st Variety, or *Phagedenic Chancre*.—Every chancre may be strictly said to be phagedenic, that is to say, it destroys the tissues which are in contact with it, but in simple, uncomplicated cases, its progress soon becomes checked and limited by the infiltration of lymph which sometimes surrounds it, and which Hunter considered

as one of the features of a genuine chancre. When there is an absence of this induration, which, when occurring in a slight degree, I shall call healthy, we may observe the 2d variety of chancre, which I shall call *Diphtheritic Phagedenic Chancre*, an example of which is given in Plate V., figure 1.* Its form may be various; it has a tendency to extend rather in breadth than in depth, in consequence of the skin or mucous membrane offering but little resistance to it. The surrounding parts are but slightly swollen, or if any swelling be present, it has rather an œdematosus or phlegmonous character than the specific induration; in size such ulcerations cover a large surface, and secrete a thin, darkish colored, acrid pus.

3d Variety: *Indurated Chancre*.—I have not thought it necessary to give a drawing of the indurated chancre, a form which Hunter described; it is rarely met with either in London or Paris. The cases which I believe Hunter meant, were chancres as seen in Plate IV., figure 1, *h*, provided they had an indurated base and sides, or what I should now describe as a simple chancre on an indurated base. This sore and the following is the one spoken of by Mr. Carmichael as giving rise to the *scaly venereal disease*.

4th Variety: *Indurated Phagedenic Chancre*.—The simple superficial sore will occasionally become indurated to a considerable extent, and plastic lymph be deposited in the cellular tissue around and beneath it in large quantities. In these cases the centre of the induration is observed to assume a dark appearance, and what M. Ricord calls an interstitial gangrene results, which gains by degrees the whole surface; commencing at the centre, it reaches the circumference, and then becomes limited; it seems as if this gangrene resulted in consequence of insufficient nutrition from compression exercised by the induration upon the vessels. A good idea may be formed of this chancre from Plate V., fig. 2. I have lately seen under Mr. Lawrence's care at St. Bartholomew's hospital several cases of this description. The cicatrix of a previous sore became cartilaginous and quite transparent; in a few days red streaks were observed running through it; these became darker until the whole indurated mass lost its transparency, and assumed the peculiar character seen in Plate V., fig. 2.

5th Variety: *Gangrenous Chancre*.—In addition to the form of phagedenic chancre last mentioned, the result of excessive induration, there is likewise another, the consequence of excessive inflam-

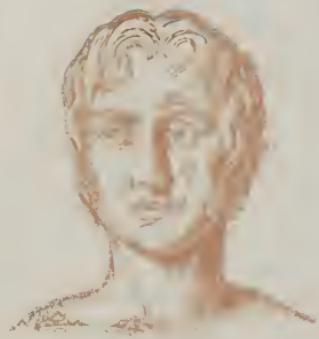
* This is the form of chancre which Mr. Carmichael considers as giving rise to the *phagedenic venereal disease*, and has by him been named *acute phagedena*.

mation, which I shall call gangrenous chancre. Violent inflammation may attack any simple chancre as it does other parts of the body, and gangrene of the chancre follows, succeeded by a grayish or blackish slough, which, on falling off, leaves the surrounding tissues in an infiltrated state, but no induration remains. The secretion appears of a very acrid, irritating character, and consists rather of liquid tissues destroyed by the gangrene, than of pus or any secretion from the blood. (See Plate V., fig. 3.*)

Period of Reparation.—Under whichever of the forms above described chancre may have first appeared, the reparative process is ushered in by the appearance of healthy granulations on the surface of the sore, the margin, which was slightly elevated, becomes on a level with the ulcerating surface. The cicatrix extends from the circumference toward the centre; finally, the indurated base becomes absorbed, and a perfect cicatrization, level with the surrounding skin, occurs. When the chancre has existed on the skin or mucous membrane, a slight cicatrix only will remain; but on parts where the cellular tissue is not in abundance and lax, as on the glans penis, or neck of the uterus, a depression will often result. A stain long remains on the spot where the chancre has existed; at first of a livid hue, it gradually grows paler, until the cicatrized point ultimately becomes whiter than the surrounding skin.

The reparative stage, like the ulcerative, has its *varieties*. Thus, instead of healing rapidly, and from the circumference toward the centre, various points on the surface begin to cicatrize, or on one side only of the chancre. In other cases the sore cicatrizes, but no sooner does this happen than it begins again to ulcerate, or as the cicatrix commences on one side the ulcer enlarges on the other; thus we have a chancre lasting an indefinite length of time. The granulations may likewise be slightly or very much raised above the level of the surface; in the latter case forming the *ulcus elevatum* of some writers. Such a sore, however, has usually lost its specific properties, and the secretion it furnishes is no longer inoculable. In some cases the ulceration in cicatrizing becomes indurated; instead of forming a healthy cicatrix, we observe a callous thickening, which, on the slightest cause, breaks out again into an ulcer of a very unhealthy character, as occurred in Plate V., fig. 3. Lastly, a chancre will become changed into what I shall hereafter describe as a mucous tubercle. In this case, instead of being gradually covered by a

* Different varieties of chancre, and their different positions are shown in Plate IX.





healthy cicatrix, there will be observed upon it an hypertrophy of the tissue, of a softish texture-like mucus, but lobulated, as represented in Plate VI.*

Cause of Chancre.—“Cause,” observes M. Andral, in his valuable Lectures on General Pathology, “is a term which, in the natural sciences, may be employed in two senses.

“1st. It refers to, or represents, a *force* or power susceptible in itself of impressing a change on matter; as matter is inert, every change which it undergoes must be the result of a *force* which philosophers have agreed to call *cause*.

“2d. The word *cause* is employed in speaking of a fact which has preceded another fact, and which is associated with it; and we apply the term to the phenomenon, upon the manifestation of which another phenomenon depends.”

Barthez calls this an experimental fact, and it is in this sense that I intend using the word *cause* in the following pages.

The cause of chancre I have, in the preceding section, traced to the *secretion* of another chancre, for we found that, when introduced under the epidermis, it constantly produced a peculiar series of phenomena.

Let us now, then, see how far observation can enable the surgeon to study or explain the circumstances which constitute, form part of, dispose to, prevent, &c., the action of this cause.

In tracing chancre to the secretion of another chancre, the quantity of which, although very minute, will constantly produce its effects, M. Ricord was necessarily led to push his investigations further; but neither the microscope, physics, nor chymistry, have enabled him to isolate the cause: all his endeavors have hitherto failed in separating it from the other component parts of the secretion of the sore, and whether it exists as an entity, or in combination with the globules, or the fluid part of the pus, or whether these serve only as a vehicle for it, we are unable to say, nor do we venture even an hypothesis upon the subject, so few are our data for forming an opinion.

We are equally ignorant of the exact parts of the sore which secrete it. We find it on the surface of the ulcer; washing or wiping it away only removes it for the moment—it becomes secreted afresh directly afterward; but, as in the case of other secretions, we are in-

*These varieties in what I call the reparative process have formed the basis of a division of chancres described by Mr. Evans, and more lately laid stress upon by Mr. Skey. This reparative stage of chancre is, I believe, the one which, according to Mr. Carmichael, gives rise to the papular eruption, and hence forms the papular variety: that gentleman not taking his divisions from the primary sores, but from the eruptions which he believes to follow them. I shall have again occasion to allude to this opinion.

capable of discovering the molecular action, but it would seem to be a vital one, and does not resemble that peculiar action of *leven*—a term applied to it by ancient authors.

This secretion, removed from the surface of the chancre, and kept in close bottles during seven days, will produce at the end of that period all its effects, proving that the vitality of the part is not necessary for the preservation of its peculiar effects. Once secreted, it becomes independent of its source, resembling the virus of cow-pock, small-pox, &c.

Various chymical agents have the property of neutralizing or destroying it; thus, if the alkalis or acids be mixed with it, and inoculation afterward attempted, no effects will follow; these same substances will likewise destroy the property which inoculation has invested the sore with, of producing an analogous secretion, provided they be employed at an early stage.

Simple substances, or ointments, will have no influence either in destroying or aiding the effects of the secretion.

We shall then, in accordance with the usual custom of authiors, call this peculiar secretion, which is the cause of chancre, a *virus*—not that we have been able to show its separate existence, but simply because the word secretion is too vague. We shall combine it with the word syphilitic, as this term distinguishes it from all other morbid agents, and treat of the cause under the denomination of *syphilitic virus*.

Origin of Syphilitic Virus.—We have just traced syphilitic virus to the secretion of a particular sore which secretes it, generated by the virus of a similar ulcer produced in the same way; at least we can affirm, that at the present day there exists no well-authenticated observation in the annals of science, which proves the spontaneous origin of syphilis.

Undoubtedly (observes M. Ricord), we daily meet with cases which it is difficult to explain; but when we consider the many sources of error liable to occur, and that our patients have an interest to deceive us; when we reflect that the disease is contracted under illicit circumstances, we should remain convinced that the one exceptional case in a thousand ought to be attributed to the same cause as the nine hundred and ninety-nine, the origin of which is regular and constant; and as long as it can not be shown that other agents, as well as the secretion of a chancre, will produce syphilis (as we understand the term), we shall not be convinced that it can arise from the operation of any other agent.

Allowing that in the present day chancre can not be traced to a spontaneous origin, still, say some authors, it is no less certain that this affection must have commenced *somewhere* and on *some one*. We fully agree in this, and we frankly state, that in the present state of science it is impossible to determine where, when, or under what circumstances, it first appeared ; in this respect, however, the origin of the virus is concealed from us, as is that of many other material objects ; but although the origin of a thousand facts be concealed, the existence of these facts is incontrovertible.

If we may be permitted (says M. Ricord) to proceed by analogy, we shall see in the history of the vaccine matter several curious and important inductions. The transmission from the cow to the human species has not always been so well known, yet it must have always occurred. Suppose, then, that at the present time we were ignorant of its origin, it would be no less incontestable that the vaccine matter is not of spontaneous origin in the human race, and that it becomes developed as a consequence of inoculation, or by means of the specific matter taken from an affected person, and applied to a healthy individual. Is it not possible that an analogous source, in the first instance foreign to the human species, may have furnished the first germ of syphilis, which, when once engrafted, has propagated and maintained itself, as the vaccine matter, which, like it, was at first foreign to the human species ? It is certain that true chancre has never been seen on any animal with which we are acquainted, despite the researches which surgeons of the present and past ages have made ; and it is no less certain that, notwithstanding my experiments at the venereal hospitals, I have been unable to inoculate any animal with chancre, so as to produce its effects ; but who can say that we shall not discover to-morrow what we were unable to find yesterday, or what we are in search of to-day ?

Leaving, then, this interesting but speculative field of inquiry, we turn to the consideration of those accessory circumstances and conditions which are necessary for the production of the special effects of the virus. These we propose describing under three heads.

1st. Necessary conditions of the chancre from which the virus is taken.

2d. The means and conditions of the agents of transmission.

3d. The necessary conditions of the parts about to be contaminated.

Necessary conditions of the chancre from which the virus is taken.— In the first place, it must itself have been derived from another

chancre, which must be at the period we have called specific or progressive, for we have already remarked that it is during this first period of the existence of the chancre that the peculiar virus is secreted. Provided the chancre be thus derived, and presents the ulcerating stage, notwithstanding the length of time it has existed, be the physical characters well marked, the shape circular or oval, the situation on the genital organs, arms, mouth, &c., still the virus will produce its effects if the other conditions be present.

We have just stated a general law, namely, that certain conditions of the sore, from which the virus is taken, are indispensable to the production of chancre. Yet to this law there are apparent exceptions;—a man has connexion with a prostitute, and chancres appear on the penis; the external and internal genital organs of the girl are examined, and no chancre is found. Here is the virus acting, and yet, say some people, it does not come from an ulceration. Such cases in practice are not uncommon, but they in no respect invalidate our position, for there is every probability that the virus has been recently deposited from an ulcer of a third individual on the vagina, which being covered with mucus prevents its local action on that membrane, and thus the vagina merely serves as a vehicle for the virus, as any one of the means we are about to speak of.

The means and conditions of the agents of transmission.—The fact that the virus is capable of being separated during a space of seven days, from the ulcer which has produced it, without losing its contagious properties, has been already mentioned; at the end of that period, if still in a liquid state, or, if dried, provided it be only moistened, the virus may be transmitted in a variety of ways, of which we may enumerate some of the most frequent.

Lancets or other *cutting instruments* may accidentally become soiled with the virus, and thus the surgeon may unconsciously inoculate an incised wound. We have been witness of a case of this kind: venesection was ordered and performed in the usual way; a few days after, the patient drew the attention of M. Ricord to the point in the arm, which assumed *all the characters of chancre*, and was very difficult to cure, as induration followed. Such a case shows the necessity of great caution in the employment of instruments which may have been soiled with the virus.

The *Penis* may serve as an agent of transmission of the virus, as in cases like the following: A young man had connexion with a prostitute; in the course of the same day he had connexion with a female who previously had been free from disease; in a short time

chancres appeared on the second female, although the young man never presented any symptoms whatever of syphilis. Here, then, the penis was a simple agent of transmission, as the lancet was in the last case.

The *vagina* may become a means of transmission of the virus ; this frequently happens in prostitutes. An individual suffering under chancres has connexion with a girl ; a quantity of virus is left in the vagina, but produces no action, as the mucous membrane is covered with a secretion. Should a second individual have connexion with this female under these circumstances, the virus may affect him, and no local disease be discovered on her genital organs, even after the most minute examination. Such cases are not unfrequent. Here the penis has performed the part of a sponge, and completely cleaned the vagina, which was simply a passive agent of transmission.

Various secretions have been often accused of causing or transmitting the virus. The *semen* is spoken of as among the most frequent. That this may occur is undoubtedly ; when a urethral chancre exists, the semen may, in passing over it, carry along the virus which is placed on the surface ; in a similar manner the *milk* may become a vehicle for it, provided a chancre exists on the nipple. The *saliva* may become charged with the virus, if a primary sore exists on the mouth, of which we shall hereafter give instances.

At the present day we are little disposed to give credence to stories of chancre transmitted by means of the *breath* ; and in the nineteenth century a minister of the crown is not likely to be accused of communicating the affection to his royal master by means of whispers. We now-a-days attribute a chancre rather to the company a man keeps than to the air he breathes.

Various articles have the character of transmitting chancre ; thus, Mr. Colles believes that in Ireland the inmates of a cottage have become infected by the use of the sole *spoon* that a peasant family possesses.

M. Cullerier mentions that at the venereal hospital chancres may be transmitted from one individual to another by means of *tobacco-pipes*, *drinking-glasses*, &c. The employment of *chamber-pots*, and sitting on *water-closets*, have been successively invoked to explain various difficult cases. Believing that such means of transmission are possible, we maintain that they are not probable, and the medical man should be very cautious how he admits them : patients will be always disposed to conceal the true source of disease, if illicit practices have been indulged in ; and in affections of the mouth it is very

difficult to distinguish primary syphilitic sores from various aphthous ulcerations which are epidemic, and run through whole families, in consequence of similarity of diet, clothing, low, unhealthy situations, &c.

Sheets have been believed capable of transmitting the virus; patients affected with simple eruptions on the skin have slept in sheets on which the secretion of chancres has fallen, and the simple sores have been converted into characteristic chancres. I witnessed a case where this was possible, in a patient of M. Puche, who presented chancres on the penis; he stated that he was taken up in consequence of the riots of May, and put in a prison where prostitutes had been previously kept; about two months afterward chancres appeared on the penis. Now here we might suppose that this was the source of the affection; but when we state that the prisons of Paris are the scenes of unnatural crimes, we should rather conclude this to be the source of the sores, and not the sheets.

Hildanus has given rather an odd story of a young lady affected with chancres, who could in no way account for their origin; she at length remembered having disguised herself in man's apparel, some short time previously, and danced the whole night at a public masked ball; it was then found that a young man, who was at the time suffering under chancre, had worn the trousers previously, and consequently it was believed that the said *pair of pantaloons* had transmitted the disease. In such cases, when the medical man has to decide about a young woman, a masked ball, and a pair of soiled inexpressibles, with a youth in the distance, we may excuse him if he is lenient to the fair sex. Various articles used in dressing wounds may accidentally become the means of transmitting the virus, particularly *sponges*, *lint*, &c. During the last winter, M. Ricord removed a portion of diseased bone from the orbit in a patient laboring under tertiary symptoms; the wound took on a peculiar appearance some few days afterward, and inoculation of the secretion at once showed that this wound had, through the intermedium of lint, or the water, or sponge (it was impossible to say which), become inoculated with virus from another source, for the patient himself presented no primary affection; in this case the instruments could not have been the source, as they were new, and had not been previously used.

This case should put the surgeon on his guard; and in venereal hospitals the greatest attention should be paid to cleanliness; this,

however, is not always possible, in consequence of the habitual carelessness of the attendants.

The necessary conditions of the parts about to be contaminated.—For the production of artificial chancre *on the skin*, we have already stated that it is necessary to introduce the virus beneath *the epidermis*, and we may add that an abrasion of that structure is always necessary for the action of the virus. In practice, we find that chancre follows abrasions, excoriations, fissures, incisions, leech-bites, wounds, scratches, &c.; hence results that variety in shape which the sore may assume; around the rectum we observe those ragged fissures which have no analogy with the circular chancre described by Hunter. We have lately seen a chancre on the thumb of an individual, having the shape of an ordinary small incised wound; he stated, that in following his occupation as a tanner, he cut his hand; he slept soon afterward with a prostitute; the cut surface became inflamed, and he was unable to cure it with the usual remedy, namely, bathing the hand in the tan-pits. He left the hospital cured of the chancre by the usual treatment.

The previous considerations will at once explain why the animal economy is more liable to chancre at one period of life than another; thus the delicate skin of the infant, as well as its greater vitality, render infection (*cæteris paribus*) more probable than at any other period of life; on the contrary, the dry and shrivelled condition of the tegumentary covering at the decline of life, causes chancres to be comparatively rare. We find, moreover, that absorption is sluggish, and the chances of exposure to the virus are less than at the age of puberty, when the passions of youth and a forgetfulness of consequences lead to such frequent exposure.

We may mention the influence of sex as a predisposing cause. The female exposes herself less than the male, consequently is less frequently the subject of syphilis; but when, as in the case of prostitutes, she exposes herself to contagion, we nevertheless do not find chancre so frequent; this depends upon the structure of the female genital organs, which are not so liable to abrasions as the male. In Paris, the frequency of the *fleurs blanches* may be mentioned as a cause of this species of exemption, as it shields the parts from the action of the virus.

For the production of chancre on *mucous membranes*, the same principle holds good; there must be a lesion of continuity of the epithelium, otherwise the virus will have no effect. There is an apparent exception to this law, but closer observation shows that it is

not a real one. The virus may insinuate itself into a mucous or sebaceous follicle, and having destroyed its lining by a species of irritation, comes in contact with the cellular tissue, and then a pustule or abscess is formed. When situated in a little mucous follicle, the virus may remain inactive some days in consequence of the cyst, as the virus is in the same condition as when enclosed in bottles; the cyst being destroyed, the virus acts directly. This was probably the case in the instance of Mr. H.,* and explains some cases of supposed incubation.

* On the 24th of September, A. H., a young surgeon, twenty-five years of age, had connexion for the last time with a woman of the town. He observed at the time that she suffered under a discharge. Immediately after connexion he washed himself carefully with cold water. Suspicious of the consequences, he paid great attention to cleanliness, and took care to wash and examine the penis daily.

On the 6th of October—that is, twelve days after connexion—while in a warm bath, he observed two small but suspicious spots on the glans penis. In the course of the same day he asked the opinion of a young medical friend, but on examining the glans no trace of them was apparent; he took a long walk, and in the evening a small swelling appeared in the right groin.

On the morning of the 7th he observed these spots again very apparent, and employed some sulphate of zinc as a local application.

On the 8th they assumed a vesicular character.

October 9th. Mr. H. consulted me to-day; on the glans penis there are two ulcerated points, which present all the character of follicular chancres delineated in plate IV., fig. 2, with this difference, that they have been ruptured. In accordance with my views of syphilis, I felt called upon to cauterize them with a pointed pencil of nitrate of silver, and ordered the part to be constantly washed with lint soaked in aromatic wine.

On the 10th, a superficial sore appeared near the frænum, which was cauterized, as well as the sores on the glans penis; the glands in the groin remain stationary.

October 11th. During the course of the last night, a superficial sore appeared on the lining of the prepuce, which I cauterized this morning, thus making four sores at present existing. Nitrate of silver was applied freely to the other three, and the aromatic wine and lint ordered. There is no inflammation present; of course the nitrate of silver has somewhat increased the ulcerating surfaces.

October 12th. The caustic was again applied.

13th. The sores are going on so well that Mr. H. would not submit to a further application of the caustic, and took a very long walk. To continue the aromatic wine.

15th. The two sores on the glans penis are completely healed. The ulceration on the prepuce is becoming somewhat indurated, but is nearly healed. The sore on the frænum discharges considerably.

17th. All the sores are now completely healed; induration of that one on the prepuce and some redness alone remaining to show where the disease has existed. As I thought a continuance of the aromatic wine and lint could serve only as an irritant, I desired the patient to leave them off.

18th. The induration and hardness of the prepuce remain, accompanied with some redness. I therefore requested M. Ricord to look at it. He, however, would not give an opinion, as he was uncertain if the induration depended upon a specific disease, or upon irritation, the consequence of cauterization: he, however, leaned to the latter opinion, from the antecedent history of the case, &c.; he recommended that the aromatic wine be continued, and to watch the result.

In our investigations we have not met with a single case which would seem to contradict the general law we have attempted to establish, namely, that abrasion of the epithelium or epidermis is necessary for the action of the virus; some authors differ in this opinion, considering that simple contact of the skin and virus is alone sufficient for the development of a chancre. In these last cases, the virus might probably act as an irritant or escharotic, and destroy the surface; the virus would then come in contact with the cellular tissue, and such cases, far from contradicting, prove the proposition we have above laid down. There are other cases which, interpreted in a different manner, might lead to the supposition that syphilis may be introduced into the system without any abrasion of surface. Chancre may heal in a few days, as we have elsewhere stated; the virus may introduce itself into a follicle or point of the skin, and the follicle may become closed, or the point by which it was introduced perfectly heal in a short time; in none of these cases abrasion of surface will be apparent, yet chancre will become developed, giving rise to the opinion that lesion of continuity is not necessary.

We think we may with advantage here inquire, if there are any per-

23d. The indurated point has been slightly ulcerating the last few days, and now presents an excoriated surface; on the glans there is likewise an excoriated point, which is distinct from the situation of the former chancre. M. Ricord saw Mr. H., and at once declared the sores to be specific. They were of a secondary nature, he believed, and would not inoculate or reproduce the disease. Ordered to wash with the aromatic wine, apply an ointment of calomel and opium, friction with a drachm of blue ointment, and bathe on alternate days. A mild diet was ordered.

24th. During the last twenty-four hours, the point which had completely healed at the frenum has again broken out; the surface is excoriated; there is a point of the same nature on the prepuce. M. Ricord's bandage and an *emplastrum vigo* on the bubo. Continue the treatment.

25th. The indurated sore on the prepuce has not increased in size, and is nearly dry, being covered with a yellowish crust; that at the frenum is in the same state as yesterday. The fresh ulceration on the prepuce bleeds on uncovering the glans, which was very painful yesterday; the pain was much alleviated by soaking the penis in water; the aromatic wine causes great pain. Continue the treatment, and observe a horizontal position, was my prescription to-day.

P. S. The bandage remains well on, and is not tiresome. The frictions have occasioned an eczematous eruption on each thigh where the ointment has been applied.

November 4th. The sore on the prepuce has now completely cicatrized; the treatment has been carefully followed; but Mr. H. is a determined smoker; in other respects he has committed no excess.

7th. The induration of the sore still remains, though it is much diminished in extent; there is a slight mercurial fœtor of the breath, and a somewhat red state of the gums. M. Ricord saw the patient to-day, and desired friction every third day, taking care against cold.

This patient left soon after for England.

sons non-susceptible of chancre? If we choose to depend upon the word of some authors, as well as some men of the world, there exist certain privileged beings who are not susceptible of syphilis.

It is a fact, founded on experience, that *some few* persons pass through life without contracting chancre, although they have exposed themselves to contagion. Such persons do not present the accessory conditions we have just spoken of; thus the virus did not remain long enough on the epidermis to destroy it and act on the cellular tissue below. If it be the case of a female, the vagina was probably coated with thick mucus, which prevented the contact of the virus, or it was inflamed; and experience shows that an inflamed and secreting surface will take on with difficulty the specific action of chancre; the same occurs on a blistered surface, the secretion appears to wash the virus away. If, then, any part covered with a perfectly healthy and compact epidermis be exposed to contagion, we are not surprised at seeing no effects result; this fact also proves the correctness of our opinion. But we can not agree with those who believe that there are individuals who resist the action of chancre; we are certain that we can produce a genuine chancre on any individual who will submit to inoculation: *the privileged few* will then find that they have previously escaped contagion from one of the circumstances above mentioned.

When the virus is taken from a sore under conditions before described, and transmitted by means of any of the agents mentioned, and lastly, brought in contact with the tissues in certain conditions, the effects will be regular and constant, and the point of the skin with which the virus comes in contact will be the seat of the chancre; its development will, moreover, as seen in Plate IV., fig. 1, *a, b, c*, begin immediately, so that no incubation can be said to occur. In practice, however, cases happen which apparently contradict these statements, and which are believed by some persons to prove the existence of incubation. Patients sometimes state that a chancre has only existed a week, and yet they have not exposed themselves to contagion for a month previously. Here the patient makes a wrong statement, although without any intention of deceiving the surgeon; for on closer examination it will be often found that he has, from inadvertence or other cause, never examined the affected part since the time of exposure to contagion and the period that pain or some other symptom first called his attention to the chancre, which he observed a week ago; in such a case, it would be correct to say that he observed the chancre a week ago, but not that it has only existed for that period.

How often have we not been called to treat bubo, or even secondary symptoms, when interrogating the patient he affirms he has never had primary sores ; yet, on uncovering the glans, we have shown him sores which he had never observed, and was not cognizant of, inasmuch as they had given rise to no inconvenience ?

There are, however, other cases which are brought forward to prove, and which at first sight seem to indicate, incubation ; the case of Mr. H. is a good instance. Persons expose themselves to contagion ; they wash carefully the parts exposed ; they examine day by day to see if chancres are produced ; when several days have elapsed, they observe certain suspicious-looking pimples ; here, however, we may naturally suppose that the virus has entered, during coition, the mucous or sebaceous follicles, and lies inert, until, by the irritation it produces, destruction of the lining membrane takes place ; it is then placed under conditions most favorable for its development. That this is not mere supposition, the case of Mr. H. proves ; most probably this always occurs in urethral chancre, as experience shows that a secretion from the canal rarely occurs before the fifteenth day, and this fact has been dwelt upon by M. Puche, who wishes to form a diagnosis by this means between gonorrhœa, the consequence of simple inflammation, and urethral chancre. We shall again have occasion to mention and discuss these points. Such cases as we have described, if they do not explain our views, at least must tend to shake confidence in the supposed theory of incubation.

Is there more than one cause of chancre? We have, in the preceding sections, spoken of one cause alone, and we have studied the conditions necessary for the action of that cause ; we have spoken of it as constant in its effects when placed under the necessary conditions for its development ; thus far we have seen no reason for supposing that there exists a second or third virus. Authors have not always been of this opinion, and persons have counted as many as five viruses ; they have founded this opinion upon the number of primitive sores, or secondary eruptions ; however, few men of the present day admit more than one, which may, according to circumstances we are about to mention, give rise to any of the variety of primary sores we have spoken of under the head of the anatomical characters of chancre.

To the consideration of the causes of the varieties we beg now to call the attention of our readers.

Causes of the Varieties of Chancre.—On examining fig. 4, *a, b*, plate IV., the reader will observe what surgeons are otherwise well

aware of, namely, that chancres *on the same individual* usually present similar physical characters : thus, an indurated and a phagedenic sore are not met with on the same patient : but if several chancres exist, they are usually simple, indurated, phagedenic, &c. Inoculation of a great many sores proves, likewise, that chancre will generally assume the same characters on the same individual—we say usually, for when the situation of a sore causes it to put on a peculiar aspect, of course the inoculated point on the thigh, not influenced by similar causes, will not exactly resemble the sore whence it was derived. The knowledge of this fact, viz., that all sores have a tendency to take on the same characters in the same persons, is of use, inasmuch as it should deter practitioners from employing inoculation in gangrenous or phagedenic sores ; an evil which we have dwelt upon elsewhere,* and the non-observance of which we consider liable to bring inoculation into disrepute.†

Scruples which can not be too much admired, have prevented M. Ricord from inoculating one person with the secretion of a sore from another ; we have been thus unable, by direct experiment, to show that an indurated sore will not produce its fellow, or that a phagedenic sore will not cause a phagedenic ulcer on another constitution ; but although we have been unable to solve this question by direct experiment, observation has satisfactorily shown that the characters of sores do not depend upon the source from which the virus is derived. Need we cite the celebrated case, detailed by Dr. Fergusson, of several English officers who were attacked each by a variety of sore, contracted by connexion with the same female, a Portuguese opera-dancer ? We are acquainted with three students who had connexion with the same *grisette* during one evening ; one was affected with a phagedenic sore ; the other was a long time recovering from an indurated chancre ; the third had a simple excoriation, which was slighter than that which we witnessed on the genital organs of the female, whom we examined a few days after the debauch.

If the source of the varieties does not exist in the nature of the chancre from which it was derived, as the preceding cases and thousands of others clearly prove, we must look for them elsewhere. Our belief is, that no one cause can be assigned for the varieties ; chancre, like other diseases, may be modified by a variety of circum-

* See Lancet, vol. 1, 1839-'40, pages 354, 533, &c.

† Since the above was written, I have had occasion to witness the deplorable effects which injudicious inoculation may produce. Phagedena of the thigh has succeeded to a most fearful extent in one case, and the life of the patient was despaired of.



1



2



3



4



stances; thus, climate, constitution, age, plethora, debility, bad air, insufficient clothing, &c., are so many causes which will tend to produce the varieties of chancre.

An attentive examination of the varieties of chancre has enabled us to enumerate some of the causes which appear to give rise to them; thus, bad food, insufficient clothing, intemperate habits, exposure to cold, local stimulating applications, are a few of the causes which make a simple chancre take on the *diphtheritic* character.

Young plethoric persons, who use great exertion, or who are addicted to the abuse of spirituous liquors, at the same time that they expose themselves to vicissitudes of the weather, or who change suddenly their diet or climate—such, we say, run a great risk of the chancre assuming that variety which we have called *gangrenous phagedenic*.

Scrofulous individuals, or old men who have led a dissipated life, or men subject to the diseases of hot climates, persons with skin diseases, and constitutional complaints, whose health has been ruined by several courses of mercury, as well as those whose chancres have been treated injudiciously, will be found to present the *serpiginous variety* of chancre.

Lastly, we arrive at the *indurated variety*. Here the cause is by no means clear, yet it is the one which we are most interested in discovering. The indurated chancre may appear in a variety of constitutions. The one delineated in plate V., fig. 2, occurred on the penis of a young man of a clear, transparent complexion, of short stature, but who could not be said to present very evident marks of scrofula. In the case of Mr. H., detailed at page 188, the constitution was good, though somewhat lymphatic, and he was subject to hypochondriasis.

Sex seems to have some influence; it is most common in males, yet we have seen various cases in women.

Situation apparently interferes but little, as chancre may, in any situation, take on this character, although an ulcer situated on the prepuce is most frequently indurated.

We have been unable to connect induration with any peculiar mode of local treatment; we have seen persons affected with the most obstinate forms of indurated chancre, who had not been treated either locally or generally; on the other hand, the most simple and judicious local management of a sore, immediately after its commencement, has not always prevented the occurrence of this character, which deserves so much attention from the practitioner, as it betokens a

peculiar liability to secondary symptoms ; the relation between the two we can only observe, and not account for ; it is one of those primitive facts (as M. Andral calls them), the solution of which science, as it at present exists, does not permit us to a tempt, and of which a more or less probable hypothesis can only remove the difficulty one step farther back.

The Diagnosis of Chancre.—In describing artificial chancre, considered in reference to its chymical, physical, and microscopical characters, as well as the local effects produced on the economy when the secretion is introduced into the system, we have given the diagnosis of chancre. But it may not be uninteresting to consider practically the subject, and allude to such cases as present difficulties. A case is presented to our observation at its origin ; that is to say, we are consulted for a pustule, a small abscess, or an excoriation, such as seen in plate IV., figs. 1 and 2. How is a correct diagnosis to be formed in this case ? A rational diagnosis may often be founded on the appearance, situation, history, and course of this stage of chancre, but only a rational one. The value to be attached to each circumstance we shall consider in detail.

1st. *The Appearance.*—It is a fact which no one who has seen much of venereal disease can contest, that a primary sore presents characters which are very striking, and there are many surgeons who rely principally upon them in forming an opinion on the nature of a sore. M. Velpeau has assured me that he lays great stress upon it. This opinion will be corroborated on referring to plate IV., figs. 1 and 3, with its accompanying description. But though a primary syphilitic sore has generally a peculiar physiognomy, still it is incontestable that other sores, not of a specific nature, may assume all the aspect of real chancres. If, for instance, a piece of corrosive sublimate be placed between the glans and the prepuce, a sore, in every physical character resembling chancre, will follow ; hence we conclude, that the appearance of the chancre is only of relative value in the diagnosis.

In further illustration of the difficulty which attends the diagnosis, when a surgeon judges of the nature of a sore from its appearance, I may mention that many of the most eminent men in our profession, both in England and France, differ in opinion upon the diagnosis of the disease represented in plate IV., fig. 2. Several of those to whom I have submitted it, say, " Your diagnostic sign of inoculation was unnecessary ; we should have judged it syphilitic from its appearance." I have met with many who have stated the contrary, and

ridiculed the notion of chancres existing on the leg. "These sores are chronic ones, such as you may see in my hospital any day," said a learned surgeon, lately, when I showed him the original drawings.

If, however, a primitive sore usually assumes the characters above-mentioned, it is no less certain that in some few instances it presents no peculiar features, yet it is no less a chancre. Thus, then, the mere presence or absence of certain appearances can not alone enable us to decide upon its nature.

2.. *The Situation.*—As inoculation has proved that chancres may occur on any part of the skin or mucous membrane, the mere situation of a sore will in no way assist our diagnosis, unless as urging us to examine more carefully those parts which are most likely to conceal them from our view, such as the deep portions of the vagina, uterus, urethra, rectum, mouth, &c.

3. *The History of the Sore.*—If there is any one circumstance which has led, or leads surgeons frequently to form a false diagnosis, it is the history. Thus, supposing that a patient avows that he has exposed himself to infection, and a sore follows, the simple fact of exposure only gives presumptive evidence that a sore is syphilitic, inasmuch as this sore may have been produced by simple irritation, or by abrasion. It is not sufficient to know that connexion has preceded, but it is likewise necessary that a reasonable time only has elapsed between the act of coition and the real, not the reputed appearance of the sore. We are well aware that the space of time before a chancre appears may be considerable, as occurred in the case of Mr. H—. (See note, page 188.) Here, probably, the pus introduced itself into a sebaceous follicle, and only came into action when it had destroyed the epithelium, and thus acted directly on the cellular tissue. But allowing the possibility of this fact, which is rendered probable by the experiments of M. Ricord, we must not give credence to all such statements, or suppose that chancre has appeared six weeks after connexion; for we find, on interrogating the patient, that through inattention or some other cause, he has not examined whether, during the interval which has elapsed between the last coition and the period at which he first observed the chancre, a sore existed or not; and it will often be found that a chancre, of a supposed week's duration, has in fact existed a month. What surgeon is not well aware that patients complain of buboes or other symptoms, and deny ever having had primary sores?—yet, on uncovering the glans, he shows the patient a chancre, of the existence of which the latter was ignorant.

The *history*, then, like the *situation*, *aspect*, &c., is, alone, insufficient to found a diagnosis on ; but if it is deceitful when the patient is desirous of telling the truth, how often may the surgeon be misled when the patient has reason for concealing his antecedents. In the female it is next to impossible ever to attain the truth. The irritation of the menses, or some other cause, is alleged to explain the ulcerations about the genital organs. We have mentioned elsewhere* the case of a female who suffered under ulcerations around the rectum, yet at first strenuously denied that they could possibly be syphilitic ; although, at last, she was obliged to admit the fact. We might cite numerous cases to prove that an absolute reliance can not be placed on the history of patients.

4. *Various Complications*.—It is certain that buboes occurring with sores are *prima facie* evidence of their being syphilitic. But we should recollect that any simple irritation in scrofulous habits will give rise to them, and perhaps such buboes are more difficult to treat than any others. Similar observations may be made on other complications. In fine, we may state, that these circumstances, when present, can only furnish a rational diagnosis.

5. *The Course*.—It is very true that chancre frequently has little tendency to heal, but on the contrary, gradually progresses ; these are, however, characters not peculiar to chancres. There are various sores, which, in scrofulous and scorbutic constitutions, spread and heal very slowly. On the other hand, some true syphilitic sores heal in twenty-four hours ; but it is no less certain, that although such exist, they are of rare occurrence.

When these characters are absent, it by no means follows that the sores are not syphilitic, and it is from the *ensemble*, and the greater or less probability, that our diagnosis (a rational one) must be formed.

The Absolute Diagnosis.—In obscure cases, and when it is absolutely necessary to decide upon the nature of a sore, more especially in medico-legal inquiries, evidence such as we have mentioned would be insufficient. There remains, then, *inoculation*, which, although one of its greatest advocates, I would not unnecessarily employ ; it will, however, at once decide upon the nature of a sore. Here, neither ignorance nor deception on the part of the patient, nor want of experience or observation and deduction on the surgeon's part, will interfere with the conclusion. The accuracy of the test, the certainty of arriving at the truth, and the

* *Lancet*, Nov., 1839, page 354.

reputation of the surgeon, will counterbalance all objections to the operation.*

Diagnosis of the Reparative Stage of Chancre.—The surgeon is not only called upon to give an opinion during the ulcerative stage, but he may be consulted at a later period, when the sore is healing, or when induration alone remains; or lastly, when all traces have

* The following cases, taken from a paper I read before the Parisian Medical Society, show the utility of inoculation:—

"In the bed of No. 10, in the second ward of the venereal hospital, lies a patient, thirty-two years of age, a shoemaker by trade, of fair complexion. He states that from the age of thirteen till his eighteenth year, he was liable to ulcers on various parts of his body, the cicatrices of which are still visible; from the last-mentioned period he has enjoyed good health. About fifteen months since a hubo appeared, which suppurated and healed in about six weeks.

"About five weeks ago the patient observed a chancre on the prepuce, four days after connexion; soon afterward several chancres appeared around the corona glandis, and he consulted M. Ricord as an out patient. During the time he was following the treatment prescribed, a vesicular eruption made its appearance on the inner part of the left leg, which he distinctly remembers having scratched, and from that moment, the sores began, and increased in size.

"Present state—Chancres still exist on the penis, which discharge freely; on the inner part of the left leg there are twelve ulcerations of different sizes, but assuming all the characters of primitive syphilitic sores. Inoculation with the pus of these sores was made, and the characteristic pustule was produced. See plate IV., fig. 3 a.

"This, then, instead of being a case of secondary syphilis, which was inoculable, is simply an eczema which was inoculated by the nails of the patient, soiled with the secretion of the primitive sore on the penis.

"On the 27th of February, 1838, a man presented himself at the out-patient room, complaining of chancre at the *root* of the penis, and accidentally, as it were, showed M. Ricord a sore on the frenum of the tongue. The characters of it were sufficient at once to arouse some suspicion as to its nature, and this patient was immediately admitted. Inoculation of the secretion on the sore in the mouth was made, and a characteristic pustule followed. All doubt was now removed, and the avowal of the man additionally proved that this was a primitive syphilitic ulceration.

"A boy, fifteen years of age, of puny stature, lymphatic temperament, and not, apparently, arrived at the age of puberty, so slightly were the organs of generation developed, entered the seventh ward, snffering under an ulceration of a suspicious character, in the left groin. He gave the following account of himself:—

"Had never had connexion with any females, or frequented their society; about three weeks previously the sore appeared on the groin, but it could not be ascertained if it commenced as a hubo or a sore.

"As this sore presented all the character of chancre, except as to its history, inoculation of the secretion was performed, and a well-marked characteristic pustule followed. On these data the boy was interrogated more closely, and M. Ricord then found that he was in the habit of sleeping with a fellow-workman who presented chancres on the penis, which had existed some weeks. Both parties denied any unnatural practices; and whether the virus dropping on the sheets inoculated the scratch previously existing, or whether a scrofulous bubo preceded, which was caught by contact of the contagious principle, it is not here my object to inquire; but I cite this case, to prove that without inoculation the case would have remained very obscure."—*Lancet*, l. c. pp. 354, 533.

passed away. In the first and last cases it can be of little consequence to ascertain the nature of the affection ; if it should be, particular caution must be used, and a rational diagnosis is still more difficult than in the first stage. Called upon to give an opinion when induration alone remains, the surgeon whose eye and touch are accustomed to syphilitic induration, will rarely fail to decide upon the specific and peculiar cartilaginous feel, particularly when seated in loose cellular tissue, as on the prepuce ; in other situations it will be very difficult to decide upon it, particularly when placed in the deeper portions of the canal, &c. But we shall return again to this subject. In these last instances we must wait patiently for the results, for, if the induration be specific, secondary symptoms will inevitably appear in a short time, and thus clear up any doubt.

Prognosis of Chancre.—In the definition of chancre, we have stated that at its commencement it is a local disease, and that it gives rise, under circumstances we can often appreciate, to symptoms of general infection. We shall, then, in the following pages, consider the prognosis under two heads :—

- I. The prognosis of chancre as a local disease.
- II. The prognosis considered in reference to the probability of general and constitutional infection or secondary symptoms occurring.

I. *Prognosis of Chancre as a local disease.*—In describing simple or artificial chancre, we have mentioned that in a good constitution it has a regular and constant course ; beginning as a pustule, abscess, or excoriation, it becomes an ulcer ; granulations are produced ; cicatrization follows, and it heals perfectly, without treatment, in a space of time which varies between *three and five weeks* ; therefore we may unhesitatingly state that the prognosis of simple chancre is favorable.

In a practical treatise, however, it is not sufficient to state this ; the surgeon should consider the prognosis under a variety of points of view, for in practice he is daily called upon to decide on the prognosis of this or that form of chancre. It is to facilitate this often difficult task that we propose devoting the following pages, founded on the strict observation of a number of cases.

What probability is there of a chancre, which is simple at its commencement, assuming one of the varieties which we have described ?— On this subject the surgeon can only be guided by a knowledge of those circumstances which seem to dispose to their production, viz. : If the patient has been exposed to bad or insufficient nourishment, has resided in an unhealthy situation, or has led a dissipated life, it is

probable that the chancre will assume a *diphtheritic phagedenic character*. If the digestive organs be disordered, or provided irritating substances are, or have been, applied locally, particularly in scrofulous subjects, a *serpiginous sore* will possibly result.

Should the chancre occur in young plethoric persons addicted to excesses of any kind, particularly to the use of spirituous liquors, at the same time that they employ much the part affected, we may anticipate the occurrence of the *gangrenous phagedenic sore*.

Lastly, as to the probability of a sore assuming an *indurated appearance*, we must acknowledge our ignorance, for, although we have witnessed it in persons of lax fibre, or in others of clear complexion, still we can give no indications, as hitherto we have been unable to associate it with any one temperament or constitution.

What will be the probable duration of the chancre?—*Simple chancre*, when left alone, usually heals in a space of time varying from three to five weeks; when properly treated, perfect cicatrization may be obtained in from eight to ten days; there are, however, circumstances which have great influence in retarding the cure—among others we may mention the *situation*; thus a chancre situated on the frænum, or margin of the prepuce, when a natural phymosis exists, will be prevented from healing by the rupture of the cicatrix when erection occurs. Chancres in the urethra, bathed as they constantly are by the urine, or when situated at the margin of the anus, or within it, will be so irritated by the distension of the gut, during the passing of fæces, that cicatrization will be often unusually retarded. Other instances might be given to show that the situation of simple chancre must influence the prognosis.

The *size of simple chancre* must necessarily modify our prognosis, as to its duration; for a large surface generally requires a longer time to cicatrize than a small one; yet large ulcerations sometimes heal as quickly as small.

The *number of chancres* might be supposed to influence the prognosis, yet practice teaches the contrary. Patients presenting several chancres are as speedily cured as those who have but one sore: cicatrization going on with equal rapidity in all.

The *duration of a diphtheritic chancre* can never be foretold, yet we may be guided, in some respects, by the state of the constitution, for, in proportion as it improves, we observe the sore to present a more favorable aspect.

When we are called upon to give an opinion on the probable *duration of a Serpiginous Sore*, we can not be too guarded; it is true that,

by rest and proper treatment, many such sores will speedily assume a healthy appearance; but others resist, and require years to cure, and, when on the point of cicatrizing, again resume all their former virulence.

In respect to the *gangrenous phagedenic chancre*, we may be more confident, as, by judicious treatment, the gangrene may be confined to the parts it has already attacked, and a speedy cicatrization be expected.

Lastly, the *indurated sore* will, if left to nature, remain in *statu quo*, or, if it cicatrizes, a cartilaginous nodule will remain, unless general and local treatment be employed, and even then it will disappear very gradually.

What probability is there of any of the affections termed complications occurring? Did we enter on this subject, we should only repeat what we stated when treating of the complications; we therefore refer our readers to that section. In diphtheritic chancre, we should remember that hæmorrhage is often to be dreaded, as well as fistulæ, their situation depending upon the tissues and parts affected. In gangrenous chancre a large and rapid loss of parts is always to be apprehended; but although deformity results, it is not so great as the state of the sore would lead the surgeon at first to suppose.

In respect to complications, the *serpiginous* and *indurated* sores present nothing remarkable.

What renders the occurrence of successive accidents probable?* —“Successive accidents,” says M. Ricord, in his ‘Treatise on Inoculation,’ “are a consequence of the extension of the disease (*de proche en proche*), or a simple extension of the primitive local symptom, as, for instance, the production of new chancres, simple or virulent abscesses, virulent or simple adenitis, &c.”

Is a bubo likely to follow? This is a question which the patient suffering from a chancre often asks. Without entering, however, at length, into a discussion of all the causes which occasion the develop-

* By successive accidents, we mean such affections as are only a gradual continuation of the same disease, for instance, the production of new chancres, the development of sympathetic buboes or abscesses, from extension of inflammation; and the occurrence of symptomatic buboes produced by the transport of the syphilitic virus.

Whenever, then, the secretion of a chancre is retained in contact with the tissues which secrete it, or comes in contact with such portions of the body as are susceptible of inoculation, we have reason to dread the formation of successive chancres; hence, chancres of the anus, of the prepuce where a natural phymosis exists, or of the *fourchette* in the female, often produce successive accidents. Besides, whenever a solution of continuity in the neighborhood of a chancre exists, subsequent sores are probable, from contact with the virulent secretion.

ment of buboes, we shall here mention such as refer particularly to chancre. The mere existence of a simple chancre does not necessarily cause bubo; in the female, for instance, bubo is rare. We have never seen artificial chancres on the thigh, of the male or female, followed by them. But if chancres on particular parts are seldom followed by buboes, there are likewise other situations which exercise the greatest influence on their formation: it will be found that in every one hundred men suffering under bubo, at least eighty have presented chancres around the frænum or inferior part of the glans or prepuce. When bubo occurs in the female, the chancre will be found most probably at or around the meatus. This fact, of the situation of the chancre and occurrence of bubo, may be reasonably explained by the connexion which exists between the part primarily affected and the gland, by means of a lymphatic vessel which carries the virus directly to it. And it also proves that the theory of exclusive venous absorption is not tenable: but it seems in accordance with the doctrine of imbibition.

In answer to our patient, we must be guided principally by the situation, not the size or the variety of the chancre; but we shall return to this subject under the head of bubo.

The fact of the tendency which buboes have to follow chancres situated on the frænum, further shows the surgeon how cautious he should be in attributing buboes to this or that treatment; in all such calculations, we should take into consideration the position of the sore.

We may here add, that bubo rarely follows any of the varieties of chancres, unless they be situated in one of these particular spots.*

Does the treatment alter the prognosis? In the preceding pages this question has been already answered: but to resume. A simple uncomplicated chancre will heal without treatment in about from three to five weeks, when properly treated in eight or ten days—the varieties, by judicious management, in longer or shorter periods, depending upon the causes which give rise to them.

Is the chancre or sore contagious? To this the medical man should answer peremptorily, yes or no. By allowing connexion, let the practitioner remember he is an accomplice, be it through ignorance of the consequences, or out of deference to his patient. Let him remember that a sore which is about to heal, or which has just cicatrized, is very liable, under the slightest irritation, to inflame, ulcerate, and present any or all the varieties above described: thus, the patient

* See Ricord's edition of Hunter.

may by ignorance or imprudence lose the organ. On the other hand, who will state that a sore which is not perfectly cicatrized is incapable of transmitting the infection? It should not be forgotten that it is impossible to say how little virus is sufficient to infect an individual; the edge of a sore which is still unhealed *may* contain the quantum, and such a permission of the surgeon may lead to the greatest afflictions in more than one family, and the innocent child may suffer for its parents' credulity, or from the surgeon's ignorance of the laws which regulate the secretion of the virus.*

H. Prognosis considered in reference to the probability of general and constitutional infection, or secondary symptoms.

It is not our intention here to trespass upon the interesting subject of secondary symptoms, as we shall hereafter treat of them at great length; but there are some considerations which so directly relate to chancre and its prognosis, that we shall here consider them.

If it be an undoubted fact that secondary symptoms are a direct consequence of chancre, it is no less certain that they do not in every case ensue. The following facts, drawn from observation, may perhaps assist the practitioner in giving an opinion on the greater or less probability of their occurrence.

1. *Stage of the Sore.*—When the chancre has proceeded beyond the vesicular form seen on the third day, we can never guaranty an absolute indemnity from secondary syphilis; the symptoms may appear during the ulcerative or reparative stages, provided these are retarded by any circumstance.

2. *Duration of the Chancre.*—As secondary symptoms are the consequence of chancre, it might be reasonably supposed that the longer it lasts, the more subject is the individual to their occurrence.

* The importance of the great discretion which it is necessary for the surgeon to show, has been lately impressed upon me by the following case: An old fellow-pupil of mine at St. Bartholomew's hospital, now established in a distant part of the country, treated a young man for some venereal affection and secondary symptoms; when he was nearly well, this patient asked the sanction of my friend to a marriage which he was about to contract. The penis was free from disease, as my friend believed, no sore being apparent, though a few blotches remained on the trunk. On such authority the marriage was solemnized, and in a few months the disease broke out again in both parties, and presented the well-marked coppery blotches. On interrogating my friend, he assured me of the correctness of the statements of both parties, and their honorable conduct; but in the conversation he accidentally alluded to a stricture of a very obstinate nature which his patient had previous to marriage. The views of M. Ricord on the existence of chances in the urethra were unknown to him, and he agreed with me in the possibility of such an occurrence, and no longer admitted that secondary symptoms were transmissible, which opinion this isolated case had induced him to believe, contrary to his views.

This, absolutely speaking, is true, and is a reason for locally destroying the virus, which is a constant secreting focus ; but the practitioner will be wrong to suppose that secondary symptoms only follow chancres which have existed a long time. Experience proves that they follow a chancre which has healed without treatment, in a few days ; and we have witnessed cases of chancres which have existed eighteen months and two years, without producing these consequences.

3. *The Number and Size.*—The preceding observations apply equally to these circumstances ; it is not on such data as these that we can alone found our appreciation of the prognosis.

4. *Situation of Chancres.*—Chancres on any part of the body, viz., on the mouth, finger, penis, or anus, &c., will be followed in an equal proportion by secondary symptoms.

If, however, secondary importance can only be placed on the stage, duration, size, number, and situation of primary sores in forming an opinion on the probable occurrence of general infection, the same does not hold good in reference to the *varieties*. Daily experience teaches us that the *serpiginous* and *gangrenous* sore is rarely followed by constitutional symptoms ; the *phagedenic diphtheritic* occasionally gives rise to them ; the *indurated almost always*. It is well known that Hunter was so imbued with this opinion, that he denied a sore to be syphilitic, unless it presented an indurated base. M. Ricord lays so much stress upon it, that when a patient enters his wards, presenting an indurated chancre of six weeks' duration, and when no secondary symptoms have yet appeared, he puts him on a "*traitement expectant*," and few days pass before the occurrence of the well-known characteristic symptoms of general infection. M. Ricord never allows a patient to leave his hospital when the slightest induration even of the cicatrix exists ; should he, in spite of admonition, quit, he is told that secondary symptoms will result, and the prediction is found to be too true.

Let us now inquire how far the *complications* can assist our prognosis in reference to the occurrence of secondary symptoms. We may erase from the list, gonorrhœa, paraphymosis, and phymosis, as they can have little direct influence in disposing to constitutional syphilis.

The circumstance of the existence of bubo demands a separate consideration. *A-priori* reasoning would lead to the supposition, that when a bubo co-exists, there would be a greater probability of constitutional syphilis following, than when chancre alone appears. Experience on a large scale, however, contradicts such an opinion ;

bubo, as we shall hereafter find, is but an internal chancre, and by no means proves that the virus has entered the system; and we do not find that absorption takes place more rapidly from this chancre in the gland than from an open chancre. This circumstance, moreover, seems to prove that the venous system plays an important part in occasioning the general infection.

Lastly, we shall speak of *the local treatment* of chancre, in as far as it may lead to the probability of the occurrence of secondary symptoms.

In the first place, let us again repeat that secondary symptoms will follow when no treatment is employed; they may (though in a far less proportion) succeed the most judicious local treatment. On the other hand, secondary symptoms may not occur, although the chancre be allowed to proceed without treatment.

Secondary symptoms do not necessarily follow, although the local treatment of the chancre has been injudicious.

In respect to general treatment, the same observations hold good. Secondary symptoms do not necessarily follow when general treatment has been neglected. The best and longest-continued plan of general treatment will not, in all cases, insure your patient against their occurrence.

These facts at once show the absurdity of some persons' reasoning, who attribute to the effect of treatment what in fact is only the natural course of the disease; it is from want of acquaintance with the natural history of the complaint, that unjust blame or injudicious encomiums are heaped upon so many therapeutic agents.

Preventive Treatment.—The legislature of France, finding venereal affections very common and very severe, in 1498 and the following years, proposed means of checking them, by confining those that were diseased in a species of prison or hospital in the faubourg St. Germain and at Bicêtre, flogging them very severely before and after incarceration. We find, however that these coercive measures were soon relaxed, and the law became a dead letter, inasmuch as its execution was, generally speaking, impossible; secondly, the persons affected with the disease were too highly connected, and the disease, notwithstanding the punishment, had increased, and become aggravated to such an extent, owing to the concealment of the primary symptoms, and the impossibility of receiving so many patients, that it was ultimately given up; and who that calmly considers the subject can be surprised, or would propose such a punishment, or cause the infraction of the liberty of the subject at the

present day ? Our modern legislators have, I think, fallen into the opposite error. They imagine that the odium tacitly attached to the disease by society, will suffice to deter persons from exposing themselves to contagion, and that government ought not to interfere, or take any steps to check it, as it would be encouraging vice, apparently forgetting that neither religion, nor the laws, nor a knowledge of the consequences, will deter men from exposing themselves to syphilis. Is the medical man to remain a silent spectator of the ravages of the disease, as some sensible but short-sighted individuals are inclined to wish him to do, because any success which attends the precautions he recommends will tend to act as a premium upon dissipation ? Were it proved that this apathy of the surgeon was attended with a moral effect on the community, the question might bear a different complexion ; but daily experience and the history of the past prove the contrary.

Let no one accuse the medical practitioner of immorality, if, in the discharge of the duties of his profession, he can suggest any preventive means against a disease which is frightful in itself and in its consequences ; for the surgeon well knows that immunity from disease does not any more lead a libertine to continue his dissipated habits, than do successive syphilitic diseases check those propensities. On the other hand, a first fault may, by the non-observance of those precautions, render a whole family miserable, and entail disease which it may be impossible to cure.

Guided by these principles, which we trust will not be misinterpreted, we shall now consider if there be any means of prevention of chancre.

Is it possible to prevent the occurrence of chancre ? If chancres do not arise spontaneously, and we trust we have convinced our readers that at least at the present day they do not, then we think we are justified in stating that we can protect an individual from them ; but if it be possible, what means can we recommend for this purpose ? In other words, what is the prophylactic treatment of chancre ?

Syphilis at the present day is widely diffused ; although it no longer presents the dreadful appearance that it did in the last centuries, still it exists, and is liable again to break out with redoubled violence, if the circumstances which favor its development occur. It becomes, then, the legislature to put a check to it as far as it lies in its power ; and we are of those who think it possible that it might be effectually destroyed, although we feel convinced that this will not

occur, as the disease must be better and more generally understood before such a universal extinction can take place.

The French, more than any nation, are advancing in the way which is most likely to eradicate it. Who has not read the work of Parent Duchatelet ?* Who is not aware that this distinguished physician and philanthropist has, during a long life, done more perhaps than any other individual to check syphilis ? He has given us the natural history of prostitutes ; he has pointed out the means of legislating for these unhappy creatures, who form, in fact, the focus of chancere ; and until means be taken in other countries to subject this class to some sort of control, it will be in vain for us to hope for a diminution of the evil ; not that we pretend to say that even in France all has been done which might or should be attempted, although we do not mean here to criticise French treatment. Did other countries follow in their steps, Europe would have cause to rejoice. As general prophylactic means, the institution of hospitals and dispensaries for the gratuitous treatment of these complaints, is of the highest importance ; and M. Ricord thinks it would not be useless to make the following preservative means known wherever a man exposes himself to contagion ; he has likewise suggested that a capable person be attached to each brothel, so that both males and females who expose themselves might be examined. This measure, by no means impracticable, would tend greatly to diminish the frequency of the disease. These are a few of the general prophylactic means which would tend to the object a community has in view. We shall not stop here to examine the feasibility or legality of them, as these subjects have so fully been discussed by Parent Duchatelet, but proceed to speak of the

Direct Prophylactic Treatment of Individuals.—The surgeon may be consulted under two circumstances : 1st, by a female or prostitute who runs the risk of communicating the disease. In this case an examination of the external organs is not alone sufficient ; the employment of the speculum is of the greatest aid in discovering the existence of internal disease.

The practitioner should likewise recommend frequent ablution, as, without producing the disease, the virus may be contained in the vagina, but not act in consequence of a layer of mucus ; hence the recommendation of the use of injections after connexion. "If women," says M. Ricord, " were only more attentive to cleanliness,

* See his book, "Prostitution in Paris," translated from the French—Otis, Broaders, & Co., publishers, Boston.

and took more care of themselves, venereal complaints would be less common."

If consulted in the case of a person who is afraid of transmitting the disease, or when connexion is dangerous on account of a supposed infection, the chlorine washes, soaps, and the other means of more effectually cleansing, disinfecting, or chymically acting upon the morbid secretions, ought to be employed; the more the parts are rendered clean, the less we have to dread infection.

The preceding observations relate particularly to those women of the town who are constantly exposing themselves to the virus.

2d. The surgeon may be consulted by a person who wishes to know what precautions he should take if he exposes himself to contagion. From the previous description of the accessory conditions of the tissues which are necessary to the action of the virus, the reader may at once infer the necessary general prophylactic means; however, there are several points which deserve a separate consideration. Thus, frequent washing the parts liable to be exposed to the virus, with astringent substances, will, as it were, tan the parts, and be a powerful means of prevention of the disease. But if this plan be advisable, the use of alkaline or chlorine washes immediately previous to connexion is very prejudicial, as removing any mucus or smegma which might serve as a defence against actual contact of the virus; a person should carefully examine and guard against any abrasion, and, if any such exist, connexion should not take place. The observance of the few preceding recommendations would prevent, we are sure, a multitude of diseases.

"There is," says M. Ricord, "a means, which the final cause of all sexual intercourse rejects, which morality has always blamed, but which necessity and certain circumstances may occasionally tolerate—I mean the *condom*."

The condom, which permits only mediate sexual intercourse, is frequently, as Astruc has so well remarked, only an illusive guarantee; it is sometimes torn; in other cases, the substance of which it is made is pervious; or, again, in consequence of having been previously used and not properly washed, it may be contaminated; lastly, though it be made of good materials, and remain perfect, it only protects those parts which it directly covers; the root of the penis, the angle of the scrotum, as well as the groin, remain exposed. In conclusion, the condom, even under the most favorable circumstances, can only guarantee an individual from contracting a gonorrhœa.

Coition should not be prolonged, and ejaculation should take place,

as this will frequently prevent the occurrence of urethral chancre, the sperm acting as a cleanser of the canal. Some persons believe that infection is more likely to occur after ejaculation ; this we see no reason at all for believing.

After coition, the greatest care should be taken in washing the exposed parts ; for this purpose, alkaline and weak chlorine solutions are preferable, as they have the property of cleansing and decomposing any contagious matter, without producing local irritation. Any abrasion or lesion of continuity should be immediately cauterized ; and it is useless to hesitate or attempt a diagnosis between the consequences of friction and that of the virus : it is better to cauterize unnecessarily than to expose the patient to the chances of infection.

CURATIVE TREATMENT.—In spite of these precautionary measures, or in consequence of no attention being paid to them, a chancre may become developed in a follicle, an ulceration or abrasion of the surface may appear, or an abscess or pustule follow.

1. When a pustule is formed, or when a mucous or sebaceous follicle is observed through the skin, filled with pus, as may be well seen in Plate IV., fig. 2, it should be opened, and a stick of nitrate of silver, cut to a fine point, introduced and passed around the little ulcerated base and sides ; we prefer this to the plan of excision with scissors, which may be employed when the pustule is seated on the prepuce ; but as patients do not like a surgeon to employ instruments, and as we have more reliance on the nitrate of silver than on excision, we recommend its general adoption.

2. In cases of abrasions or ulcerations, the stick of nitrate of silver should be passed slightly over the surface, our object being to destroy only the surface. From ignorance of the reasons of employing the caustic, we have seen the local irritation increased, and considerable escars form from the profuse employment of this substance, a plan that can not be too much condemned.

In the first instances, it is very often unnecessary to reapply the caustic ; usually, however, the parts should be cauterized as often as the eschars fall off, and the ulcerated surface does not put on a healthy, granulating appearance ; when this commences, the granulating portions of the sore should be left to themselves ; but whenever the surgeon suspects that the sore, or any part of it, secretes the virus, he should continue the application of the nitrate of silver.

It is, however, not only necessary to destroy the virus which is secreted, as well as the parts which give origin to it, but the practitioner should endeavor to check as much as possible its

secretion ; this is best done by employing the aromatic wine,* which experience shows to have that property, as well as the no less advantageous one of hardening the surrounding tissues, thus preventing them becoming inoculated, and increasing the size of the sore. Let the patient wash the sore four or five times during the day with this wine ; a small piece of lint soaked in it may be laid upon the sore, and the whole may be covered with a piece of oiled silk ; thus the lint is kept constantly moist ; it will be found well to wet again the parts before removing the lint, as it might become adherent, and cause the sore to bleed if detached with any violence.

The patient must keep quiet, but it is by no means necessary to maintain the horizontal posture, or be confined to his bed ; his diet should be light, but nutritious.

When perfect cicatrization has been obtained, and no local disease remains, the patient may be allowed to resume his usual occupations, and sexual intercourse may be permitted.

Under this treatment, simple, uncomplicated chancre will be cured in a very short space of time, and may be considered as a purely local disease, requiring no general treatment, and followed by no secondary symptoms. Let us, however, now turn the attention of our readers to the treatment of the varieties of chancre above spoken of under the term of anatomical characters.

1st. Treatment of *Phagedenic Diphtheritic Chancre*.—As this variety of chancre depends upon certain peculiarities of constitution, or general causes, such as bad living, low unwholesome situations, and frequently a disordered state of the digestive organs, the first duty of the surgeon should be to remove them, and he will place the patient in the best condition for recovery. A good nutritious diet, and change from the close confined air of a damp house, to the well-ventilated ward of an hospital, have been often sufficient to change the aspect of very unhealthy sores. We have frequently seen a warm bed and a stimulating purgative, or an astringent wash, cause, in a few days, the most aggravated forms of the complaint to take on an improved appearance ; sores which were locally irritated by stimulating preparations have, under the influence of opiates, become quite healthy ; the same sores, previously treated by mercury, have become healthy when that substance has been left off : hence we can lay down no general law ; we must attempt to discover the cause of the variety,

* This is a preparation of the French pharmacopœia, composed of *species aromatica* $\frac{3}{4}$ iv., *vinum rubrum* lb. ij., *alcoolatum vulni rarium* $\frac{3}{4}$ ij. As a less expensive wash I use Decot. *Querc.* $\frac{3}{4}$ viij. *Tinct. Catcch.* $\frac{3}{4}$ ss.

and remove it if possible ; this being done, the greatest benefit may be derived from employing lint dipped in a concentrated aqueous solution of opium, which should be kept constantly applied on the sore, covered by oiled silk ; the sore should not be dressed too often, as it is liable to irritate it : this form of dressing must be continued for some time, and absolute quietude should be enjoined ; the diet should be nutritious, and wine or beer may be allowed if the patient's general health does not counter-indicate them, or if he be in the habit of drinking to excess. 'The use of opium at bed-time may be attended with the best results, when there is a good deal of local or general irritability.

Constipation or diarrhoea should be treated on general principles, and tonics may be given with advantage. 'The use of ointments of all kinds will be usually found prejudicial, more especially as these sores secrete a great quantity of pus ; and the greasy substances rarely come in contact with the diseased surface. When, under the treatment recommended above, the chancre is getting better, the aromatic wine may be employed, and any superabundant granulations should be cauterized, and the edges of the ulcer, if very thin, or if undermined, may be excised with instruments, or destroyed by caustics ; but it will always be advisable to wait until all inflammation has subsided before this is attempted. The use of local bleeding we have not seen followed by good effects, although it might, in some cases, be found beneficial, as well as general depletion : such cases we believe to be rare.

2d. The *gangrenous phagedenic sore*, the result of acute inflammation which has terminated in gangrene, can seldom be checked at once, occurring as it does in young persons addicted to drinking ; here, bleeding, either local or general, is exceedingly prejudicial : in the early stages these means are very useful in checking the progress of the inflammation ; but when the gangrene has commenced, and the parts are struck with death, it is useless to suppose that bleeding will restore vitality, or will check the ravages of the disease. Instead, then, of venesection, let your patient keep his bed, attend to the state of the bowels, let his diet be of the mildest kind, and let lint dipped in the aqueous solution of opium be constantly applied to the gangrenous part ; cooling drinks may be given, particularly lemonade. The gangrene will, in spite of this treatment, destroy the parts which are most acutely inflamed, but it will not extend further ; consequently, during the few following days, a serous looking ichorous discharge of a very offensive smell comes away, mixed with the detritus

of the tissues ; this gradually diminishes in quantity until it subsides altogether, and the surgeon is surprised at seeing but a slight deformity result, comparatively to the severity of the disease ; a simple sore follows, which should be treated in the usual manner, and the surrounding œdema which occasionally remains may be advantageously combated by compression with strips of adhesive plaster.

If, in this or the preceding sores, any fistulous openings follow in consequence of the disease extending any depth, care should be taken that the escape of fluid be favored by position, otherwise, if it stagnate, it may considerably aggravate the disease ; it will be, therefore, well to employ a small syringe to cleanse the part.

3d. *The Serpiginous Variety of Chancre.*—We have already spoken of several indications which should incline the surgeon to prefer this or that local treatment ; in this variety, however, we are obliged to admit, that we can give hardly any rules. Having observed every possible treatment employed that the experience of M. Ricord has suggested, we have seen cases continue in *statu quo*, and, after months have elapsed, get well by the unaided powers of nature. On the contrary, we have seen cases get well under a line of treatment which a month previously aggravated the disease, and yet the sore apparently presented the same characters. Such being the case, the surgeon should be careful how he attributes the cure of this variety to any local or general application ; let him not be too sanguine ; we have been witnesses of cases like the following, under the influence of some simple or complicated treatment ; a serpiginous chancre is rapidly getting well, when, without any assignable cause, the granulations disappear in a few hours ; the cicatrix, which was nearly perfect, is destroyed ; and the sore recovers its original size, or even augments, then returns to its chronic state, and defies all means of treatment, when we are suddenly surprised at the promising aspect it assumes, which, perhaps, is only deceptive. Notwithstanding, it must be allowed that few sores present this character ; usually, if the state of the bowels be attended to, if the diet be changed, if the local treatment be guided by general indications, a cure may often be attained ; thus, cauterization may be attempted, or general stimulants be employed, provided the sore assumes a chronic form ; should the serpiginous character seem to depend upon the stimulating local treatment, an opposite one may be often tried with advantage. We have lately seen such sores benefited by employing compression with straps of the emplastrum vigo, not in all its stages, but when granulations appear ; but if this practice has succeeded in some cases, it has

signally failed in others, particularly when no granulations exist. Among other treatment, the sore has been sprinkled with starch, a layer of tallow has been laid upon it, as it was supposed that the action of the air had an injurious effect upon it ; but if successful in some cases, in others it has only aggravated the disease.

In hospital practice it is impossible to recommend change of air, but we feel convinced that a better diet, in a warmer climate, together with tonics and sea-bathing, by improving the health generally, would be more advantageous than any local treatment we could prescribe.

4th. *The Indurated Variety of Chancre.*—Unacquainted with the causes which give rise to indurated chancre, we are unable to prevent its occurrence, or to avoid those circumstances which predispose to, or keep it up : but, as we stated under the head of Prognosis, it is a very unfavorable circumstance, and one which we should attempt to remove as speedily and effectually as possible. In the first place, it predisposes to molecular gangrene, giving rise to the variety of chancre so well drawn in Plate IV., fig. 6, which extends in proportion to the quantity of induration. In the second place, it is of very serious consequence, as showing that the system is already, or is about to be, constitutionally affected. Experience has enabled M. Ricord to state, that secondary symptoms will follow indurated chancre in eighty-six out of every hundred cases.

We have hitherto spoken of chancre as a local disease, and have not recommended any peculiar general treatment, further than such as was necessary for improving the general health, or treating any peculiar symptom ; we shall now, however, speak of the general treatment, which we shall show to be as advantageous, in this variety, as we think it to be prejudicial in the last.

Local Treatment of Simple Indurated Chancre.—If, in spite of cauterization and the employment of aromatic wine, a chancre becomes indurated, the first means should be laid aside ; or if consulted for an indurated chancre, cauterization should not be attempted, as the very fact of the occurrence of the induration shows that the disease is no longer the simple local affection above spoken of. If we even destroy the local disease, we have every probability of a constitutional infection ; cauterization is, therefore, not only useless, but we run the risk of being accused of causing secondary symptoms by our treatment.

When, however, induration follows the cauterization of a chancre, and did not exist previously, the surgeon should not too hastily sup-

pose that the induration is of the specific nature above spoken of, inasmuch as cauterization will, in some constitutions, give rise to it. An experienced eye or finger will, however, usually distinguish one from the other, and a few days' quietude will prove whether it depend upon syphilis or not, as the real induration as gradually increases as the false one diminishes. (See Case, note p. 188.)

If the indurated chancre suppurate freely, it may be washed several times a day with the aromatic wine: this is not unfrequently attended with some pain, which soon, however, passes away; the sore should then be wiped dry, and a piece of lint, spread with an ointment composed of

Calomel, gr. xxiv.

Pulv. opii, $\frac{3}{4}$ j.

Adipis suis scrofae $\frac{3}{4}$ j.

This should be changed twice a day, and the sore may then be washed with the aromatic wine; care should be taken in removing the dressing, otherwise bleeding is likely to occur from the wound.

Under this treatment the chancre will usually heal; but as the induration remains, the sore is very liable to break out again on the slightest cause, and assume the phagedenic form we shall presently speak of. At other times perfect cicatrization takes place, but a cartilaginous nodule is left, which remains in *statu quo*, or, increasing in size, ruptures the cicatrix and gives rise to an unhealthy ulcer, which is not inoculable, but is most intractable.

Indurated chancre, then, *will* heal without any general treatment. The employment of mercury is *not absolutely* necessary, but, if not had recourse to, we run the risk of a simple indurated chancre assuming a phagedenic appearance. M. Ricord, at page 234 of his *Researches (Doane's translation)*, states, "If, like the physiological school, we date the cure of a chancre from the period at which the ulcer is cicatrized, without regarding the consequences, the cure will apparently be more rapid under simple treatment: and in hospitals the patients are less time under treatment. But if, in order to call a patient cured, we wait until all hardness has disappeared, we shall find an enormous difference in favor of a mercurial treatment.

"The induration remains in the first case a long time, even up to the period of the appearance of the secondary symptoms, which are of such frequent occurrence. For myself," continues M. Ricord, "while I allow that other remedies, besides mercury, possess curative properties; yet, as one of the most powerful and the most sure, I have recourse to a mercurial treatment whenever a certain degree of

induration accompanies a chancre, prevents its cicatrization, or remains after its superficial healing, and more especially when by its excess it gives rise to phagedena."

When it has been decided, then, that mercury should be used, a no less important question arises, as to the preparation, the dose, the period required for saturating the system, the indications for leaving it off, &c. There is no subject on which so much difference of opinion exists, perhaps, as on this. In the following pages we shall be guided by what we have seen, rather than by what we have read ; but for further information we refer our readers to the treatment of secondary symptonis, where we shall dwell more at length on the action of mercury. In indurated chancre we prefer a preparation which unites the good effects of iodine and mercury, known under the name of proto-ioduret of mercury. M. Ricord usually gives it in combination with henbane, and orders it in one-grain doses, in form of a pill, to be taken every night, five hours after the last meal. The effects are not at first apparent ; it does not produce colic, like corrosive sublimate, nor does it purge like calomel ; at the end of a week or ten days he increases the dose, and orders a pill to be taken night and morning. The first visible effect of this remedy is observed on the induration, which diminishes in size and hardness : the surface becomes healthy and covered with granulations, and a cicatrix follows. Provided these favorable results continue, it is not necessary to augment the dose, and the sore usually heals, and all traces of induration disappear. The pills should not, however, be immediately left off ; let them be gradually discontinued. However, it is always well to continue their use some time after the disappearance of the induration ; no general rule can be laid down, for the surgeon must be guided by the circumstances of each case. We do not recollect having seen a patient salivated in order to cure an indurated chancre, which is one of the greatest recommendations of this preparation. Far from thinking it necessary to produce salivation, we purposely avoid it ; and those who are familiar with the practice at the Venereal hospital will agree with us in stating that salivation is of a very rare occurrence ; if it should happen, ushered in as it is by an unpleasant taste in the mouth in the morning, a red and puffy state of the gums, with an increased flow of saliva, a fetid breath, a loaded tongue, disordered bowels, loss of appetite, and general feverish state, the mercury must be immediately left off ; quiet and repose ordered, with a light and nutritious diet ; and a gargle containing muriatic acid will, usually, soon put a stop to all local and general symptoms ; or

if the state of the gums require it, they may be brushed over with a little muriatic acid, by means of a piece of lint. When all the symptoms of salivation have passed, the use of mercury may be again resorted to. It will at once be seen how different is the treatment we recommend to that usually followed. Strongly opposed to the general or indiscriminate use of mercury, we highly approve of it in indurated chancre; but we do not recommend a certain dose, which every person should take, be his complaint cured or aggravated; neither do we think that the mercury should be continued until the constitution shows signs of becoming affected by soreness of the gums. We, consequently, can not agree with those who believe that salivation should be kept up several weeks; on the contrary we are guided by the state of the induration and the appearance of the sore, considering them to be the only sure guide: after the experience we have had on this subject, we may say that this is the only criterion by which the surgeon can judge.

Such treatment will not only cure the local disease, causing the chancre and induration to disappear gradually, but will likewise, in the great majority of cases, guaranty the patient from secondary symptoms—we say in the generality of cases, for we do not put this treatment forward as an absolute protection, believing that no method, however long continued, will absolutely protect the constitution from secondary symptoms. The mild and rational one we have recommended has, however, this decided advantage, that if secondary symptoms follow, they will be of a mild form; the constitution, not being injured by mercury, will bear it a second time; but of this we shall again speak, when treating of constitutional syphilis.

Excision of the indurated chancre has been recommended; but when it is remembered that this is often impossible from the situation of the parts; that it is usually impracticable to remove the whole, for, if the smallest quantity of the virus be left, the whole wound assumes the character of a large chancre; when, moreover, it is recollected that it has already ceased to be a local disease, and lastly, that if it were possible to remove the induration, the surgeon would lose one of the best guides for the administration of mercury—we reject the plan as prejudicial and useless.

The Treatment of Indurated Phagedenic Chancre.—As the phagedena in these cases depends upon an excessive induration, the most rational treatment consists in curing the induration which gives rise to it. This is best done by employing the treatment above recommended; not that we think mercury good in phagedenic sores gen-

erally, but only in such as depend upon induration ; here, *sublatâ causâ tollitur effectus* ; it is from not paying sufficient attention to these different species of phagedena that so much difference of opinion has existed on the use of mercury in these affections—we trust we have in some measure reconciled them. It is upon general treatment alone that we must depend, as the sore is often very irritable, and there is a good deal of general nervous excitement ; the use of the opium solution locally, as well as the internal employment of morphia at bedtime, are often very beneficial. These comprehend the principal means in use for the treatment of indurated chancres, as well as the other varieties ; we shall therefore now pass to

The Treatment of the Varieties of the Reparative Stage.—When the chancre remains, as it occasionally does, in a *statu quo*, any stimulating ointment may be employed ; but, above all things, rest and quietude on a bed or sofa will be of great service ; this alone will be sufficient to attain our object. When an irregular cicatrization occurs, or when the borders of the ulcerations are livid, thin, and bleed on the slightest pressure, great advantage may be derived from destroying them with caustics, or they may be removed with scissors ; a considerable hæmorrhage results, but the chancre will assume a healthy character ; the cicatrization will commence and proceed from the circumference, and the ulceration completely disappear. When cicatrization appears in various detached points, it will be well to touch the sore with nitrate of silver ; when the granulations are large, soft, and bleed on the slightest cause, a superficial cauterization will cause them to take on a healthy action. When the chancre puts on the appearance of the *ulcus elevatum*, and the granulations are exuberant, and very red, let the parts be fairly cauterized, and when this has been repeated once or twice, cicatrization will commence. In these various varieties we have found the greatest success attend compression by means of strips of diachylon, which may be changed every other day, if there be but little suppuration ; or applied daily, when the sore discharges freely. Such local treatment, combined with a tonic and nutritious diet, will usually cure these sometimes troublesome cases.

Treatment of the Complications of Chancre.—We have hitherto spoken of the treatment of simple chancre, or of its varieties ; we now turn to that of the complications, which may demand a special treatment, not in respect of syphilis, but in consequence of situation, or the co-existence of some other disease, which marks or changes

the primary affection, or induces the surgeon to modify the treatment above spoken of.

The existence of *chancre of the urethra* is now put beyond doubt ; we give an example of it situated at the meatus in the annexed wood-cut ; it likewise shows that chancre may occur along the whole course of the canal, which becomes the seat of an irregular ulceration, secreting the virus and extending rapidly. The case is described at page 274 of M. Ricord's work on inoculation.



(Chancres in the Urethra.)

The symptoms are the following : During the few days following exposure to contagion, no unusual phenomena occur, but some irritation is soon felt at the entrance of the urethra, for it is this point which is usually the seat of the affection, followed by a slight discharge of a purulent character, tinged with blood, particularly when the canal is pressed ; the urine in its passage occasions some pain, but this at first is slight ; pressure, however, on parts of the canal causes suffering, and induration occasionally is felt, confined to a particular point. On separating the lips of the meatus, a chancre may be perceived, presenting all the characters above given, and the secretion of which produces, on inoculation, the characteristic pustule. Should it occur in an irritable, bad constitution, the chancre may increase in size, gain the orifice, or destroy the surrounding cellular tissue, form abscesses, or, at a later period, fistula, giving rise to all the unpleasant consequences which usually result ; or the chancre may, by the irritation of the passage of the urine, become phagedenic, gain the deeper parts of the canal, form abscesses in the prostate, and even reach the bladder, which may be destroyed. Such a condition of the parts can not occur without acting on the system ; marasmus and a hectic state ensue from the local disease ; infiltration of urine takes place ; haemorrhage occurs from vessels which the gangrene has opened, and the patient sinks. In other cases, and

these, happily, are the most frequent, the secretion diminishes by degrees, and the chancre heals altogether, or leaves an indurated point, which causes a diminution in the calibre of the canal, forming one of the varieties of stricture which is followed in from six to eight weeks by the occurrence of secondary symptoms. Hence gonorrhœa has been accused of causing constitutional syphilis, whereas, in fact, the patient has never had aught but chancre in the canal, the secretion of which has been mistaken for that of gonorrhœa.

The diagnosis of this complication may be founded on the following considerations. The chancre in the urethra may be often detected by the eye ; it usually gives rise to a secretion from the canal on the sixth, eighth, and even twelfth day after connexion ; it has a sanious appearance, and inoculation produces the pustule ; pain is felt at a particular portion of the canal, usually close to the meatus. When induration exists, it is likewise confined to a point, is well defined, and cartilaginous.

In gonorrhœa, redness is merely observed at the meatus ; the discharge from the canal usually follows exposure to contagion immediately ; serous at first, it becomes purulent, but rarely sanguinolent, and when blood is found in it, it is rather bloody than streaked, as in chancre. Pain, at first confined to a point, extends along the canal ; there is scalding and chordee, the induration which may follow is not distinctly limited, but occupies any part of the canal, particularly the deeper portions, and is deficient in the cartilaginous feel so characteristic of chancre.

The *prognosis* is usually favorable, except when the sore assumes a phagedenic form ; it is then one of the severest diseases the surgeon is called upon to treat.

The *treatment* consists in depriving the urine of its irritating properties, by ordering abundance of liquids ; subduing any local irritation by rest and antiphlogistic means ; introducing a pencil of nitrate of silver into the canal to cauterize the sore ; recommending injections of aromatic wine, and the nightly employment of camphor in form of pills, to prevent the occurrence of erections. These will be sufficient to cure the majority of cases. When abscesses form, they should be at once opened, as fistulæ are less likely to result, and cauterization be had recourse to immediately ; if fistulous openings occur, they may be treated in the manner recommended at page 140. Induration will be best combated by general treatment ; but, above all things, let the surgeon be careful how he employs bougies, as they only tend to irritate the canal, and have no effect in removing the

stricture. We believe that such cases have been the cause of odium, being thrown on dilatation by some authors.

Chancre situated on the frænum is frequently a complication, as in erection any cicatrix is burst, and it is difficult to cauterize the part; consequently it is better to divide the frænum, if the chancre has not already done it, and treat the sore in the usual manner.

Balanitis is *another complication*, a disease which is well shown in plate II., fig. 1; when it occurs in persons who have a wide prepuce, enabling the surgeon to uncover the glans easily, and treat at once the chancre and the balanitis, it is of little importance; but should a chancre occur on the inner portion of the prepuce, and be attended with balanitis, at the same time that a narrow opening prevents us from exposing the glans and treating directly the disease, the case assumes quite a different aspect; the secretion of the chancre, thus confined in the species of sac formed by the prepuce, causes inflammation, additional chancres ensue, so that the lining of the prepuce may become an ulcerating, virulent surface; the loose cellular tissue of the prepuce becomes œdematosus and inflamed; a phlegmonous or an erysipelatous state succeeds, which often terminates in gangrene; a dark spot appears on the prepuce, usually on the upper part; an eschar forms, falls off, and the glans is observed appearing through the ulcerated opening; a fetid discharge oozes out, composed of the detritus of the gangrenous tissues. In some cases destruction of the prepuce only occurs; in others the glans participates, and a great portion may be destroyed; the vessels of the surrounding parts are exposed, ruptured, and hæmorrhage follows, which it is often difficult to check. Such are some of the consequences of this complication, the treatment of which we have already described under the head of balanitis.

When there is a natural phymosis, and the surgeon is consulted at a late period, swelling, redness, and œdema having occurred, the same treatment may be pursued, and the patient usually recovers, but the phymosis remains; it then becomes a question whether an operation should be performed or not.

If the surgeon be consulted at a later period, and gangrene be inevitable, we have seen a director passed between the glans and prepuce, and the parts slit up with a bistoury; considerable hæmorrhage follows, which seems to unload the vessels; but this does not always check the gangrene, which destroys a greater portion of the prepuce. When a case presents itself, in which the prepuce is already destroyed, and the glans exposed, M. Ricord is in the habit

of applying the opium solution, and letting the disease take its course ; a gangrene usually performs the part of the knife, and a complete circumcision results. He considers that an incision can not be of service, as no part is strictured, and the tissues divided present a puffy, lardaceous character ; he therefore prefers waiting till all inflammatory symptoms have passed away, and then removes by the knife any portions which inconvenience the patient.

There is a complication of chancre depending upon its being seated at the opening of a narrow prepuce ; here the chancres assume a linear form, like fissures, or chaps, and are very difficult of cure, in consequence of the cicatrix being torn asunder during erection, and from the urine excoriating them ; quietude, cleanliness, and the use of an ointment of calomel and opium, are very beneficial. Having cured the local disease, the next question is to treat *the phymosis*, provided it be permanent.



(Circumcision, as performed by M. Ricord.)

If the patient will submit to an operation, the following mode, as delineated in the annexed woodcut, in our opinion, is the best one. Without employing any traction, we trace in ink a line on the prepuce, which follows the circumference of the base of the glans, and is a little in front of it. This being done, the prepuce should be drawn forward and fixed between the blades of the forceps placed in front of the glans, and behind the line of ink traced on the prepuce ; let the forceps be then held in this position by an assistant. Let that portion of the prepuce which is in front of the forceps be now drawn forward by the left hand of the surgeon, while, at the same time, he with the right divides it in the oblique direction of the for-

ceps, which thus protects the glans. In this operation the skin alone is removed ; the mucous membrane is not drawn forward with the prepuce and remains intact ; if we do not wish to see a phymosis recur, this portion of mucous membrane must be removed. To effect this, M. Ricord employs a pair of scissors, slitting up the thin layer of mucous tissue as far as the base of the glans ; the two portions should then be successively held apart by a pair of forceps, and removed by dividing them at the base of the glans, as far as the frænum, which is divided the last. M. Ricord prefers the employment of torsion in these cases to check the bleeding ; lint dipped in cold water is then applied, and it may be advisable to administer an enema containing opium in the evening, or to prescribe camphor pills to prevent erections. A perfect cure takes place about the twentieth day, and the result is very satisfactory ; there is no deformity, nor have we to dread a consecutive paraphymosis.

Paraphymosis is another complication which the surgeon is often called upon to treat.

Many patients have an idea that chancres of the glans and prepuce should be exposed ; hence they keep the glans uncovered for a long time, and employ force in doing so. Should there be much inflammation, an œdematosus and swollen state of the prepuce follows, and the patient is incapable of reducing the paraphymosis. When the surgeon is consulted at an early period, applying cold to the penis, and the employment of gentle pressure, are sufficient to reduce the parts to their normal position ; but if, as often happens, there is not only paraphymosis, but ulceration, and the stricture of the glans is considerable, when there is risk of gangrene coming on, or when a paraphymosis has succeeded a natural phymosis, M. Ricord is not in the habit of attempting reduction, which is always attended with great pain, is often impossible, and if effected would only convert a paraphymosis into a phymosis. He passes a narrow-bladed knife underneath the portion of the prepuce which forms the stricture, and slits it up full an inch beyond the glans ; should there remain any bands which keep up the stricture, they should be successively divided, as well as the œdematosus fold of mucous membrane in front of the strangulated parts ; cold may then be applied, and the patient will soon recover, but flaps of the prepuce may remain, which it will be well to remove at a later period, as they greatly inconvenience the patient. The surgeon must not be surprised at seeing the incised wound take on a chancrous appearance, which, however, must be treated on the principles of chancre in general.

In the female, the situation of chancre may form a serious complication.

SECTION II.

BUBO.

M. RICORD has divided the first stage of syphilis into two parts ; in the former he describes the *primary*, in the second the *successive* symptoms. The meaning of the former term has been already dwelt upon ; by the latter denomination, or successive symptoms, I mean those which are the extension of primary symptoms by continuity of surface (*de proche en proche*) or a simple extension of the primary local symptom. Under this head I might consider fresh chancres, inflammatory or virulent abscesses and buboes. As the former subjects have been already described, it remains for me now to speak of bubo, which I consider as the type of the successive affections, to the description of which this section will be devoted.

Definition of Bubo.—In the following pages we shall imply, by the term *bubo*, a circumscribed swelling of a *lymphatic vessel or gland*, with or without suppuration.

By the term *venereal* bubo, we understand a bubo which follows sexual intercourse.

Syphilitic bubo is a term applied to those swellings which are the consequence of primary symptoms, or may arise from constitutional disease, generally termed *lues venerea*.

In the present section we shall treat more especially of syphilitic buboes following primary symptoms ; the other forms will be only alluded to here, inasmuch as they tend to the illustration and diagnosis of syphilitic ones, and as appropriate sections will be devoted to their further description.

Anatomical Characters of Syphilitic Buboes.—The first appearance



of the affection is frequently the occurrence of an inflamed lymphatic vessel, commencing at the chancre, and extending itself along the trunk of the vessel, attended with swelling, and presenting to the finger the sensation of a chord : this is seen in the annexed cut. In other instances, there is no swelling of the lymphatic vessel, but the lymphatic gland, which is connected with the chancre, becomes swollen and red, and increases gradually in size ; at first it is perfectly moveable, and unconnected with the surrounding tissues ; soon, however, the tumor is found to be attached to the deep-seated parts ; at a still later period the skin becomes connected with the tumor, forming, together with the superficial and deep-seated glans, one uniform swelling. Among the working classes it is at this period that attention is first paid to the affection, from the pain and inconvenience felt. In consequence of the enlargement of the gland, the circulation may be impeded, and a varicose state of the limb result, or œdema may come on, and cause great alarm to the patient.

The *termination* of the disease may be various ; among the rarest we may mention *delitescence* ; in such case, the swelling and other symptoms abate, the parts take on their accustomed function, and are restored to their original state.

Resolution, again, is one of the terminations ; in this case the tumor becomes moveable on the surrounding parts, and slowly assumes its natural size and form.

Suppuration often occurs ; this stage of the affection is announced by shivering, by the sense of fluctuation detectable by the finger, when the pus is seated in a superficial ganglion, although, when it occurs in a deep-seated gland, fluctuation is very difficult, if not impossible to be detected. Many young surgeons may be deceived in the sensation of fluctuation, the elasticity of a swollen gland being liable to be mistaken for fluctuation ; on the other hand, when pus is bound down by a hard mass of condensed cellular tissue, fluctuation is very obscure. In such cases it is useless to attempt to discover its presence by pressing from before backward ; the surgeon should press horizontally, or from without inward, and by this means a more accurate opinion may be arrived at. Should the abscess be left to itself, the skin covering it becomes œdematosus, discolored, gangrenous at one point, and the pus escapes by a fistulous opening ; the surrounding skin assumes a livid hue ; is thin, and detached to a considerable extent, or is perforated with several fistulous openings.

In other cases, the bubo, when formed, does not proceed to suppuration, but takes on an indolent character, becomes indurated, and is

unattended with pain ; it interferes, however, with the functions of the part, and may terminate in scirrhoue degeneration, provided there is any predisposition on the part of the individual. Syphilitic buboes may likewise become scrofulous, or be complicated with scorbutic affections, or attended with haemorrhage, hospital gangrene, or present ulcerations in every respect similar to the varieties of chancre which we shall not here stop to describe, for bubo is but a chancre of the lymphatic vessel, or gland, as we have above stated ; consequently, its secretion, parietes, &c., resemble those of chancre, and are regulated by the same laws.

On the other hand, a syphilitic bubo, commencing as above stated, may enlarge to a certain extent, and then gradually subside, and ultimately disappear ; or it may suppurate, and like any simple abscess, go through the different phases of suppuration, ulceration, and cicatrization, and present none of the characters which we have termed virulent when speaking of chancre, from which it differs in its essential feature.

Causes of Syphilitic Bubo.—In our definition of syphilitic bubo, we stated it to be a consequence of a primary symptom or chancre ; let us now inquire how this cause produces bubo. To do this, however, let us recall to the attention of our readers the anatomical structures which are implicated.

M. Cruveilhier found that the lymphatic vessels commence on free surfaces by a sort of excessively fine net-work. Their connexion with each other is seen in the annexed cut. His investigations,



confirmed by the experiments of M. Panizza of Pavia, as well as those of M. Fohman, show the distribution of vessels on the surfaces exposed to chancre. These experiments also prove that the lymphatic vessels, when injected with mercury, proceed onward to the glands, accompanying the superficial veins, anastomosing one with another, but not increasing in volume. Having reached the lymphatic glands, the vessels are lost in the substance of that organ.

Each lymphatic vessel is composed of a lining membrane, which

bears a close analogy to that of the veins, and an outer one which is said to be fibrous, and gives the vessel a great power of resistance. From the experiments of Abernethy on the larger animals, the lymphatic glands are found to be composed of a spongy cellular tissue, in which the lymphatics dilate as they enter, and again pass out at the other side of the gland, to assume the same character and size which they had on entering them.

Of course it is not here our object to show that these vessels are endowed with absorbing powers ; of this there can be no question ; but as to the properties these vessels have of selecting the substances they take up, we must be silent, being completely unenlightened at present on the intimate nature of the function of secretion or absorption ; but it is not a mere hypothesis to state that the absorbents do not, during life, take up indiscriminately all substances, and it would seem pretty well established that the lymphatic vessels often absorb the elements of substances rather than the substances themselves, although, under certain circumstances, it seems that they absorb substances which at other times they appear to have a repugnance to. It is on such a supposition as this, that modern authors have attempted to explain why pus is often absorbed without any unpleasant consequences, whereas, in other instances, the absorption of a little pus gives rise to such fatal effects.

To return, however, to the subject of this chapter—it would seem proved that syphilitic virus, on an ulcerated surface, does not necessarily give rise to successive phenomena, for the occurrence of bubo is rare in proportion to the number of chancres the surgeon is called upon to treat ; hence, we shall presently consider the circumstances which favor or prevent the occurrence of bubo.

When, however, the syphilitic virus gives rise to bubo, the investigations of M. Ricord induce us to believe that it may act in one of two ways.

1st. By absorption. 2d. By irritation.

In the former case the virus is directly taken up by the lymphatic vessels, and carried along them, and, under some influence with which we are unacquainted, deposited on the sides of the lymphatic vessel, which it destroys ; it then acts on the cellular tissue in the same way as when introduced into a follicle, and produces a chancre, which causes destruction of the tissues, until it appears at the surface, or, if unchecked, it may be carried along the whole course of the vessel, until it reaches the gland ; here it becomes developed,

destroying the surrounding parts, and eventually appearing at the surface, as above described.

2d. The syphilitic virus may not be absorbed, but give rise to an irritation and inflammation of a simple kind, as any other irritant may, not acting in a specific manner. This irritation may extend along the whole course of the lymphatic vessel, until it reaches the gland, giving rise to the chord above spoken of ; or, by a sympathetic action which the extremities of canals have, the intervening portion of the lymphatic may apparently be free from disease, and the simple irritation of the surface be communicated to the gland, on the same principle that in cases of stone in the bladder no pain is felt along the urethra, but the irritation at the neck is accompanied with severe suffering and irritation at the glans penis. We well know, likewise, that tickling the palate causes vomiting.

These various ways in which the syphilitic virus may act, do not rest upon hypothesis. Inoculation of the secretion of bubo has clearly proved that a great many buboes exist which secrete the syphilitic virus ; thus proving that absorption must have taken place, and that it has been brought in contact with the gland. A case illustrative of this is related in M. Ricord's work, at page 143 :—

“ A patient presented himself, suffering under syphilitic bubo, attended with considerable suppuration. I opened the abscess, but after the pus had been evacuated from the cellular tissue, I found in the middle of the abscess a lymphatic ganglion of considerable volume, and presenting the feeling of fluctuation in the centre. I punctured it, and inoculated the patient with the pus which it contained, at the same time that I inoculated likewise with the pus taken from the surrounding parts. While the pus taken from the ganglion produced a characteristic pustule, that from the cellular tissue remained without any effect. I made, in consequence of this case, a series of experiments which no longer left any doubt on the results of inoculation.”

Predisposing Causes of Bubo.—If chancre be the cause of syphilitic bubo, it is a fact admitted by all observers, that it is only the direct or exciting cause ; in order that bubo follow, there must be some predisposing influence, otherwise bubo would be more frequent than it is in proportion to the number of chancres. We therefore propose now to speak of those circumstances which appear to predispose to bubo.

Age has an influence in producing bubo. Infancy is comparatively free from their occurrence ; we have not witnessed any cases, but

M. Ricord has mentioned one in a child of a month old; in spite of this exceptional instance, we may say that the quiet life and light nourishment of children predispose very little to the occurrence of buboes.

Old age predisposes but little to buboes, in consequence of less exposure of the subject, and sluggish absorption; but it is by no means exempt. We have witnessed buboes occurring in old people, and we have at present under our care a female, of a very advanced age, suffering under a severe form of syphilitic bubo.

It is at the adult age that the lymphatic system seems most liable to absorption, and as exposure to the chances of contagion are at this period most common, we do not feel surprised that there exists a greater liability to buboes.

The *sex* appears to play an important part in predisposing to bubo. Statistics show that the male is more susceptible of bubo than the female. It might be imagined that this circumstance depends upon the greater fatigue to which the male is exposed, compared to that undergone by the female; such an opinion, however, is not true, for experience proves that women employed at the public markets, and who carry great burdens, are rarely affected with bubo, and in a far less proportion than in males who, from their social position, do not exert themselves. There would seem to exist some other circumstance beyond that of occupation, to explain the greater frequency of bubo in the male.

Temperament may be considered as a predisposing cause. The lymphatic temperament appears to be more liable to bubo than any other, inasmuch as it predisposes to absorption; we have not been able to connect the more frequent occurrence of bubo with the other temperaments.

The *hygienic conditions* of the patient, particularly fatigue, irritation of the part, &c., predispose to the occurrence of bubo more than any other circumstances.

The *situation* of chancre in predisposing to bubo must never be lost sight of by the surgeon; while the artificial chancre on the thigh has never, in the numerous experiments we have witnessed and made, been followed by bubo, chancre situated around the frænum, meatus of the female, or at the ischium, is seldom unattended by bubo. Whatever be the explanation of the fact, there can be no doubt that in the last-named situation bubo follows very frequently.

The *size* of the chancre does not seem to have the same influence; we have seen very large chancres existing during a long

period of time, and yet unattended with bubo ; on the contrary, a small chancre, if situated at the frænum, is very often followed by bubo.

Treatment of primary sores has been repeatedly stated to predispose to bubo, many surgeons believing that, by locally treating the chancre, the virus is driven into the system. There is not in surgery a more incorrect opinion than this, and we feel disposed to lay down the contrary principle, namely, that the more speedily and effectually a chancre is destroyed, the less will be the probability of the occurrence of bubo. It is true that irritation of a chancre predisposes to bubo, but as the nitrate of silver does not irritate, but, on the contrary, acts as an antiphlogistic agent, its use can not be said to predispose to bubo. However, we do not pretend to state that the use of the caustic will always prevent the occurrence of buboes ; but though it will not, in all cases, succeed in preventing them, it will nevertheless render their occurrence less probable ; and when bubo follows the employment of the caustic, it is usually not virulent, and yields readily under proper treatment.

The idea that when a primary sore is treated by mercury, there is less disposition to the occurrence of bubo, has of late years fallen into disrepute, as it has been found that buboes occur during and after the use of mercury ; and even Hunter states that mercury sometimes occasions bubo. It is our opinion that mercury has no effect either in preventing or predisposing to the complaint.

Symptoms of Bubo.—The earliest symptoms usually show themselves during the second week of the existence of chancre ; we have rarely met with them during the week following contagion. They are often ushered in by shivering, or the first indication of a bubo is afforded by a pain in the part, attended by heat and swelling, increased by motion ; there is occasionally fever, and the affection may take on an acute character, presenting all the local appearances described under the head of anatomical characters ; or it may assume a chronic form, and become of a very indolent nature.

Diagnosis of Syphilitic Bubo.—Did the limits of the present work permit, we would treat of the diagnosis of bubo from aneurism, exostosis, and the affections which may be confounded with bubo, as well as from hernia, when the tumor is situated in the groin ; but we are obliged to pass over this very interesting inquiry, and to call the attention of our readers to the diagnosis of syphilitic from the other forms of buboes.

The opinion of a surgeon may be asked previous to or during the

suppurative state ; we shall, therefore, consider the points on which the diagnosis may be founded in these two stages.

1st. *Diagnosis of Syphilitic Bubo, previous to Suppuration.*—In such a case the surgeon can only arrive at a rational diagnosis, as it is impossible, before suppuration to give a decided opinion upon a point which, though of great importance, has hitherto puzzled the most celebrated authors.

When a bubo appears during the second or third week of chancre, or during the period of cicatrization, particularly if the ulceration be seated at the frænum, at the meatus urinarius, or on the ischium in the female—if it be confined to a superficial gland—if, moreover, it rapidly goes on to suppurate—the surgeon will be usually correct in calling it syphilitic, particularly if all these characters are present in one individual.

The diagnosis is not always easy ; there are many conflicting opinions, so that it is difficult to decide upon the true nature of the case. Some have advanced that your diagnosis should be based on the antecedent history of the case, so that when a patient has exposed himself by sexual intercourse with a prostitute, and a bubo follows, it must necessarily be syphilitic ; in this opinion we can not agree, for, as we stated in speaking of chancre, every ulceration which follows promiscuous intercourse is not necessarily syphilitic, for the same reason every bubo is not syphilitic ; although, then, we may rationally consider a bubo syphilitic which follows *a sore* contracted in promiscuous intercourse, we should not so stigmatize every bubo which follows connexion, unaccompanied by chancre.

This brings us to the consideration of a point of great importance, viz., what is the nature of a bubo following connexion, though not preceded by chancre ? Observation of a great number of such cases leads us to the following conclusion—that impure connexion may produce inflammation of the glans or prepuce, causing gonorrhœa præputialis, excoriations, or gonorrhœa, and will subsequently produce venereal non-syphilitic buboes, which, consequently, may be readily distinguished from the virulent forms.

There are, however, cases in which it is sometimes difficult to distinguish syphilitic buboes from what the French call *bubon d'emblée*. Patients present themselves suffering under bubo, yet denying they have had chancres, or any affection of the genital organs, this is what is called *d'emblée*. Now, in the majority of such cases on carefully examining the vagina, neck of the uterus, rectum, glans, or urethra, a chancre, or traces of it, will be observed, clearly

proving that the bubo is a syphilitic one ; but if this happen in the majority of instances, it is no less certain that there are cases which seem to merit the term *d'emblée* ; thus buboes occur in persons who have neither object nor wish to deceive, without our being able to trace them to chancre, or any local affection. Are we justified in calling them *d'emblée*? We think not, as the following case proves : M. Ricord inoculated from a superficial chancre, and on the following morning the characteristic pustule was evident, but the chancre from which the pus was taken he found completely cured ; now had a bubo followed, it would have been called *d'emblée*, as no traces of existing disease would have been found ; yet we see how incorrect this conclusion would have been. The few remaining cases of *bubo d'emblée*, may, we think, justly be attributed to scrofulous enlargements of lymphatic glands, produced by any local excitement, as connexion, &c. That this is the case, is further rendered probable by the constitution of the individuals, by the indolent character of the swelling, and by its rarely suppurating ; further, by several glands being the seat of the disease, and by their never having furnished inoculable pus, although the experiment of inoculation has been often repeated. It is on a consideration of the circumstance relative to each case that the diagnosis must be founded ; but if the preceding observations are borne in mind, the surgeon will not often fall into error.

Diagnosis of Syphilitic Bubo in the Stage of Suppuration.—We have stated that an open bubo is in every respect analogous to chancre ; hence, it would be useless to repeat what we said upon the diagnosis of chancre, and we refer our readers to that chapter. It is only when a syphilitic bubo suppurates that we can decide if the bubo has been produced by the *absorption* of the virus, or by *irritation*.

Prognosis of Syphilitic Bubo.—Many surgeons believe that the mere existence of bubo is a very unfavorable occurrence, as showing that the disease had made great inroads on the system ; but our readers will at once observe, that the prognosis of bubo may depend upon a variety of circumstances ; the mere existence will not throw any light on the prognosis ; and our opinion must be founded on other data. To this subject we demand the especial attention of our readers.

In forming a prognosis, we must first decide whether a sore exists which may have caused the bubo ; if so, we should ascertain if it be a chancre ; on the other hand, if the patient has suffered or is suffering under gonorrhœa, or any simple non-virulent affection, then

the prognosis will be always favorable ; but if we have reason to believe that the bubo is a syphilitic and not a sympathetic one, the next question to decide is, if it be a virulent bubo, or merely a consequence of irritation ; until this has been decided, it is impossible to form a prognosis.

The prognosis of bubo, however, is favorable, inasmuch as it is found by statistics, that in every hundred cases twenty only are syphilitic, and that only a portion of these will suppurate.

The prognosis of bubo, preceded by or accompanied with chancre, is, generally speaking, unfavorable, inasmuch as it is probable that the bubo is a virulent one ; but let it not be supposed that other buboes are not likewise very unfavorable as to their prognosis, particularly scrofulous ones, which are extremely indolent. A bubo, however, which is a consequence of gonorrhœa or simple wound, usually soon disappears.

The surgeon will therefore see how necessary it is, on the subject of prognosis, to arrive at an accurate diagnosis of the disease which has preceded the bubo, as well as of its nature ; for he will thus be able, not only to allay the fears of his patient, but save his reputation, by predicting whether a bubo will suppurate or not.

The probability of the suppuration of a syphilitic bubo will depend upon the period at which the surgeon is consulted. If at a late period, when the skin is red and inflamed, and the bubo assumes an acute character, whatever may be the treatment employed, suppuration may be expected. In a good constitution, when treatment has been employed early, although a chancre has preceded the bubo, great hopes may be entertained of preventing suppuration.

The opinion of the surgeon is often asked upon the *probable duration* of a bubo. Any opinion that may be given should be very guarded, and must depend upon a mature consideration of the circumstances which have preceded. Thus, every prospect of a speedy cure may be held out by the surgeon, when called in early, when there are no acute local symptoms, in a good constitution ; but when the bubo is suppurating, and you have reason to consider it a virulent sore, or when it occurs in a bad constitution, it is impossible to predict the period of the cure. On this subject, however, we must refer our readers to the prognosis of chancre, as it is rather the latter complaint that we have to consider.

The termination of bubo in induration depends, in a great measure, on the nature of the primary sore ; thus, if it be already cartilaginous, the bubo will probably become likewise indurated. Should a

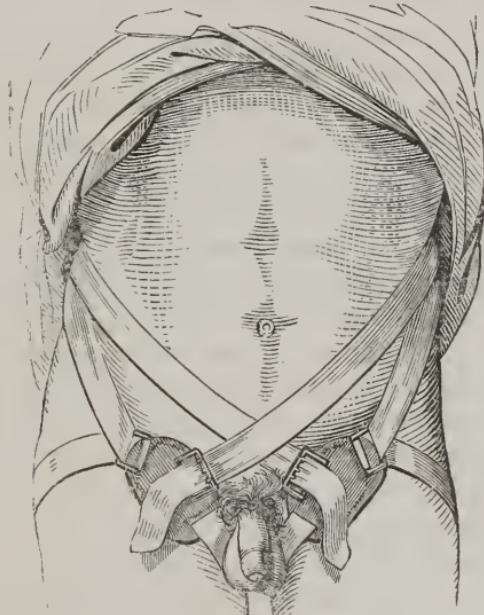
bubo occur in a lymphatic individual, our prognosis will be always very unfavorable, more especially if the bubo is indolent, for we have always equally to dread the consequences of a very acute or chronic bubo.

With reference to the probability of the occurrence of secondary symptoms after bubo, we must repeat, that as the tumor is only syphilitic twenty times in every hundred cases, secondary symptoms *could* follow bubo only in the same proportion; experience proves, moreover, that secondary symptoms do not even occur in that proportion, thus showing what is well known with respect to primary sores, viz., that every chancre is not followed by them. Observation on a large number of cases has likewise shown that virulent bubo, unattended with induration, is not followed more frequently by secondary symptoms than is simple chancre; a virulent bubo, however, attended with induration, like indurated chancre, is almost invariably followed by secondary symptoms; consequently, in the prognosis the surgeon must be guided by the same principles that were laid down under the head of indurated chancre; constitutional infection being observed as frequently in cases of external as of internal chancres.

Treatment of Syphilitic Bubo.—The *prophylactic treatment*, or the means of preventing the occurrence of bubo, merits our first attention. This is best accomplished by considering the causes, both direct and indirect, which lead to bubo. As speedy a cure as possible of the primary sore is of the utmost importance; for although, as we stated above, bubo does not always occur, although a primary sore may exist several months, nor after the existence of large sores, still, as bubo is a direct consequence of chancre, it should be our object to cure the latter as soon as possible, as no individual can be guaranteed from bubo as long as a chancre exists; and our readers, we hope, are convinced that the speedily curing chancre by local means does not render the occurrence of bubo more imminent.

But the surgeon must not depend alone upon a speedy cure of the primary sore; he should consider and choose that treatment which is least likely to irritate it, and this is undoubtedly the use of the caustic in cases of simple chancre. To persons unacquainted with the action of nitrate of silver, it might seem paradoxical to state that its action is antiphlogistic, but we have already, we hope, proved that this is its true mode of action. On the contrary, we should avoid all stimulating applications, or lay them aside if they have been used; absolute repose should be recommended, or if the patient's occupations do not permit this, we must enjoin him to use as little exercise

as possible, recommend a suspensory bandage if the sore be on the penis, and use the other means recommended against the occurrence of the complications of chancre. If, in spite of these precautionary measures, or if the surgeon be called to treat a bubo at its commencement, it is indifferent at this stage, *as far as the treatment is concerned, to diagnose accurately the nature of the bubo*; cold water, ice, repose on a sofa or bed, with slight clothing, are among the most potent means for bringing about delitescence of the swelling which has lately commenced; cold applications, however, should not be persisted in, provided they cause pain, or when, as in some few cases, they tend to augment the swelling. Under these circumstances, or if an individual will not submit to any restraint, the best means of treatment is the employment of compression, either by means of graduated compresses of linen, fixed in their proper position by the figure-of-8 bandage, or a bandage or truss of an oval shape, which was invented by a pupil of M. Ricord's, and which he constantly employs with the most signal success.



(Truss for compressing Buboes.)

It consists, as seen in the woodcut, of a pad of an oval form; to the inner part of this oval pad is fixed a strap, which passes around the thigh, and then goes through a pulley on the external edge of the pad; it is then brought back and passed around the loins, and having

gained the front of the abdomen, and then the groin, is ultimately attached by means of a buckle to the pad, thus enabling the surgeon to employ compression to any extent.

The application of the bandage will be readily understood with the aid of the accompanying woodcut.

Employed at an early period, and in the way above recommended, compression will be found a very advantageous treatment, and will often occasion the disappearance of these swellings, or effect what the French call their *abortion*.

Abortive Treatment.—The surgeon, however, is often consulted when the bubo has already made considerable progress; there is redness of the skin, considerable heat and swelling, but no inflammation is perceptible; at this period the usual antiphlogistic means must be employed and vigorously followed up, viz., general bleeding, the use of tartar emetic internally, the local application of leeches, the employment of cold washes or ice, &c. If fomentations be employed, they should be continually changed, and thus warmth and moisture constantly maintained; in place of poultices of linseed meal, the common arrowroot made from the potato, and prepared as a poultice by the addition of boiling water, is far preferable; it is not liable to become rancid and thus irritate the skin, it never becomes hard, and has the further advantage of causing continually an oozing of moisture; during the night it is particularly advantageous; during the day we prefer lint dipped in warm water, and laid on the bubo, taking care to cover it with oiled silk, and to change the lint every hour; by these means we have obtained the happiest results in speedily and effectually relieving all local inflammation. It nevertheless happens that although the acute symptoms are removed, a sub-acute state continues, or the surgeon is called to treat an indolent bubo; in the practice of the venereal hospitals we have met with many such cases, and we have seen the following treatment followed by success: During the daytime, let the swelling be covered with an *emplastrum vigo cum mercurio* and compression by means of the truss be made, as recommended in the preceding pages; in the evening let the bandage and plaster be removed, and let a drachm of blue ointment be carefully rubbed on the swelling before a fire during a quarter of an hour, and place an arrowroot poultice over it; on the following day the compression and frictions may be repeated, until all swelling has subsided. In case of the failure of these means, recourse must be had to a more vigorous treatment. It is at this stage that we have seen much benefit derived from covering the tumor with a blister, and

when the epidermis has been thus removed, gently placing the blue ointment on the parts, which may be covered with a poultice ; when the blistered surface has healed, a second and third blister may be applied, and the same dressing repeated. The mercury, in all these cases, is employed rather as a local resolutive application than as a specific remedy, consequently it is our object rather to place the ointment on the tumor than to occasion its absorption from the chancre, and thus make it pass through the affected gland—the point that Hunter seems to have had in view ; of course, should salivation ensue, the employment of mercury should be instantly laid aside, and the usual means of treating ptyalism be had recourse to.

In all the plans previously recommended, it will, we hope, have become apparent that it is our object to cause the resolution of the tumor by absorption, and prevent suppuration ; experience, however, proves that these much-wished-for ends can not always be attained. When bubo follows a chancre, and when, consequently, we have every reason to suppose that absorption of the virus has taken place, and has been carried into a ganglion, all our endeavors to promote resolution will too frequently fail ; still, under such circumstances, it is better to act as if the bubo were caused by irritation, and not despair of dissipating the swelling, for we are no longer living in the good old days of humorism, when it was supposed that that surgeon was the best, who by all the means in his power would assist nature in chasing all the peccant humors from the body. For this purpose, in place of dressing a blistered surface with the blue ointment, let a piece of lint dipped in a solution containing twenty grains of corrosive sublimate to one ounce of water be applied, and kept on the denuded skin for two hours, or a shorter time if it cause great suffering to the patient (a circumstance almost constant) ; let a poultice on which some laudanum is poured, be applied and frequently changed ; in consequence of this caustic application an eschar will be formed, and when it falls off, the caustic may be again employed according to circumstances. Under this treatment, indolent buboes will get rapidly well. When employed in virulent swellings, the pus is often seen oozing through the cauterized part, and on the separation of the eschar the true nature of the virulent bubo is at once seen, forming, in fact, a chancre which is brought into view by the destruction of the walls of the abscess. Blisters, then, and caustics, may be said either to promote absorption, if that be possible, or to hasten the opening of a virulent abscess, before it has had time to undermine the surrounding structures. There is, however, a great objection to

the use of the blister and the corrosive sublimate ; they cause great pain in their application, and leave considerable cicatrices, which are indelible marks of the disease ; consequently, the surgeon should use them with discrimination, and only in cases where all other means have failed.

When a patient presents all the signs of fluctuation in the swelling—when the skin is thin, livid, &c.—the methods recommended above are worse than useless, by the loss of time occupied in their employment ; the virus within extends itself on all sides, and, when opened, the abscess will be found very extensive. To avoid these consequences, the surgeon should open the abscess on the very first symptoms of the occurrence of pus ; provided the case be virulent, an opening should be made, for it would be useless to expect absorption. The incision should be made in the direction of the greatest diameter of the tumor. In the inguino-crural region, it is in the direction of the inguino-crural fold ; in the case of suppuration of the vertical glands of the thigh, it is in the direction of the axis of the limb that the incision should be made. Incisions on these principles do not expose the patient so much to subsequent burrowing or secondary abscesses, or cause crucial incisions to become necessary at a later period.

If it be an important question to decide on the proper direction of the incision, it becomes a no less one to consider its length ; in small abscesses, a simple puncture is usually sufficient, particularly if there be no reason for supposing that it is not a virulent bubo ; in such cases a large incision is unnecessary, but when there is a large quantity of matter, when the skin over the abscess is livid, blue, and thin, when we suspect its virulent nature, and that it has undermined to a considerable extent the surrounding parts, a free incision is absolutely requisite ; for in such cases we can not expect that the skin will become attached to the parts below. The same principle holds good, likewise, in cases of fistulous openings which extend on either side ; they should be freely opened, for unless this is done, cicatrization will not take place. It is quite unnecessary to press out the pus ; such pressure gives rise to pain, and the use of the tent is only requisite in cases of non-virulent buboes, as in others the virus will inoculate the cut surfaces, and prevent closure of the opening.

Treatment of Suppurating Syphilitic Bubo.—When the surgeon is consulted at this period, or when a bubo has been opened, the treatment must vary with the circumstances of the case. In the majority of instances, the treatment is similar to that recommended for chancre

and its complications. Should inflammation, phagedena, or gangrene, be present, the specific nature of the bubo should be lost sight of, and the usual treatment of those affections employed ; this having been effected, we should turn to the treatment of the specific disease ; care should be taken that the virus does not remain in contact with the surfaces which secrete it ; this is avoided by the use of baths, washing the part often, and the employment of the aromatic wine ; position may often be useful in allowing the secretions to pass away. Such treatment, combined with cauterization of the abscess, will usually succeed in bringing it to a happy termination, and cicatrization will follow, healthy granulations filling up the cavity of the abscess.

This, however, will occasionally be retarded by an indolent state of the bubo, by the skin presenting livid, thin edges, or being undermined by the disease ; in the latter cases it is useless to expect that granulation will spring up as long as these portions of the skin remain around the abscess ; their removal is therefore indispensable. This may be effected by snipping them off with a strong pair of curved scissors. Patients have often a great objection to the use of instruments, and they may be very reasonably replaced by employing the Vienna paste,* which, by virtue of its caustic properties, not only removes the superfluous portions of skin, but likewise causes the surrounding parts to take on a healthy action.

When the edges of the suppurating bubo ulcerate, when it extends daily, or remains stationary, M. Ricord fills the abscess with the powder of cantharides, and orders a blister on the bubo ; the following morning, if induration exists, the edges of the blistered surfaces are dressed with lint, on which mercurial ointment is spread, and the abscess is washed with aromatic wine ; should it be a simple bubo, common dressing or applications of white wash to the blistered surface, and the aromatic wine to the abscess, are sufficient.

This treatment, with the powder of cantharides, is not so painful as might be imagined ; healthy granulations spring up, and the whole character of the sore is changed, and it will be often necessary to check the exuberance by the nitrate of silver ; in consequence of the extent of the disease, cicatrization will often take place imperfectly or irregularly ; the usual means of lightly passing the caustic over the surfaces will be found advantageous ; when the cicatrix is livid and indurated, it should be destroyed by repeated and partial applica-

* The *Pâte de Vienne* is composed of five parts of caustic lime, and six of caustic potash, with sufficient spirit to make a paste.

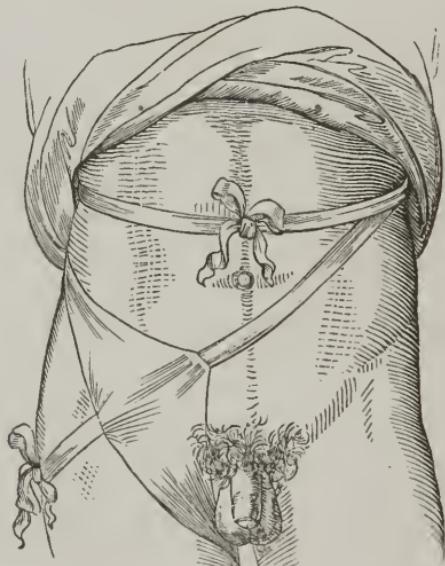
tions of the Vienna paste, and a more healthy surface will be the result.

Should induration of a specific kind follow a bubo, the general constitutional treatment with mercury must be had recourse to, and be guided by the same principles as were laid down in speaking of indurated chancre.

In scrofulous constitutions, the tonic and general treatment must be had recourse to. Change of air, a nutritious diet, tonic medicines, particularly the various preparations of iron, together with local stimulants, should successively or conjointly be had recourse to.

Lastly, in chronic indolent swellings of the superficial or deep-seated glands, neither local nor general treatment will suffice to remove the swollen state, or to remedy the various obstructions to the venous and absorbent system. In such cases recourse must be had to the *pâte de Vienne*; a superficial layer is laid on, and when the eschar falls off, another and another may succeed; replace it, until at length the whole mass of enlarged glands has disappeared. This process is often indispensable, although very painful, and is far preferable to excision, as recommended by some authors.

To maintain poultices or dressing on the bubo, or even to employ compression by means of lint, I can strongly recommend a bandage, invented, I believe, by Messrs. Evans and Perkins, of Mortimer street, London; its application is well seen in the annexed woodcut.



(Inguinal Bandage.)

CHAPTER II.

SECTION I.

SECONDARY SYMPTOMS.

DEFINITION.—Under this term we comprehend those various morbid phenomena which appear on the skin, mucous membranes, or in the eye and testicle, the consequence of absorption into the circulation of syphilitic virus, giving rise to a constitutional affection which is hereditary, or, in other words, capable of transmission from the mother to the child, but incapable of inoculation.

SYNONYMOUS TERMS.—Secondary symptoms have been variously designated by different authors. Some writers group under the term *syphilis*, not only what we now understand as primary, but likewise secondary symptoms, without distinguishing them either from one another, or from other diseases. This is not surprising when the difficulties attending the subject are considered, or when the erroneous notions then entertained upon medicine are weighed.

The same observations apply to *syphilitic affections*, a term which includes indiscriminately everything which resembles the disease we are describing, and one which, as at the present day, has often no very definite meaning.

Morbus pustularum, *la verole*, *la grosse verole*, are likewise synonymous terms; more modern writers have spoken of *lues*, *constitutional syphilis*, *accidents secondaires*, or *constitutionnels*, as distinguished from the local, primary effects of syphilis. We shall employ the term *secondary symptoms*, as it enables us at once to classify the various effects which we are about to describe; and it has the additional advantage of being generally accepted. We shall, however, attempt to give a more distinct character to the affection we are about to treat of, and avoid that vagueness of expression which has distinguished some writers on this interesting division of syphilis.

HISTORY OF SECONDARY SYMPTOMS.—If we admit that primary symptoms were described and known to authors long before the discovery of America, &c. (as we have elsewhere wished to prove), we might naturally expect that secondary symptoms likewise existed; and from the description in the Bible, as well as in the Arabian, Greek, and Roman authors, little doubt remains that they formed the major part of the diseases of the skin then so prevalent; we may, however, add that they do not seem to have been attributed or believed to bear any relation to primary symptoms; or, if known, they were confounded together in an unintelligible manner.

It was toward the close of the fifteenth century that we find secondary symptoms described as depending upon syphilis; the light at once thrown upon the diseases in question may be accounted for by the existence of predisposing causes, which, as at the present day, are found not only to aggravate, but change altogether the physiognomy of the disease.

We owe to Fernel, however, in 1556, the first accurate description of secondary symptoms: he first pointed out the relation that secondary symptoms bore to the primary, and it is this distinction which has so greatly assisted and contributed to an accurate knowledge of the former.

In 1784, Hunter, adopting the classification of Fernel, further subdivided secondary symptoms into *sympathetic* and *virulent*. The virulent he again classed under two heads.

1. Those which appear during the early period of the constitutional infection.
2. Those which are observed at a much later period.

In the former he placed eruptions on the skin and affections of the mucous membrane; in the latter, diseases of the periosteum and of the bones.

It is, however, M. Ricord who has recently introduced a classification of constitutional syphilitic affections, which we are confident our readers will consider the most perfect hitherto proposed. Following Fernel, he has separated primary from secondary symptoms, and has shown us how to distinguish them; adopting also the views of Hunter in some points, he has differed from and improved upon that eminent surgeon's classification, and the second division of Hunter he has preferred to place in a separate order, and called them *tertiary symptoms*. The reasons for this deviation from the doctrines of our great master will be given in their proper place.

GENERAL OBSERVATIONS ON SECONDARY SYMPTOMS.—Previous

to describing secondary symptoms, it will be well to devote a few pages to some general considerations. In our definition we have stated them to be the consequence of absorption into the circulation of the syphilitic virus, or to depend upon a poisoning of the animal economy by the virus, which we have described in the first chapter of this part.

It might appear that this opinion, now generally received, is capable of demonstration. Such, however, is not the case; no one, to our knowledge, has ever attempted to inject the virus into the circulation. The probable consequences of such an experiment would be so severe that no medical man would undertake it, nor would any one be justified in thus experimenting upon his fellow-creatures; and as the syphilitic virus has no perceptible effects on animals, we are deprived of two of the most valuable adjuncts in our investigations. Medical men have been content to collect such observations as daily experience furnish, to prove that secondary symptoms are the result of absorption of the virus into the general system.

A long-continued observation, and accurate inquiry, in a large hospital, as well as extensive private practice, lead M. Ricord to state that a case of secondary symptoms, *d'emblée*, never occurs. The exceptional cases depend upon hereditary infection, or from inattention on the part of the patient to his antecedent history, or to his ignorance of what chancres are, &c. In every case in which he has been consulted, chancre either existed, or some traces of it could be seen; in fact, the exceptional instances may be reasonably accounted for, as in the *bubon d'emblée*. This is now so generally admitted, that we shall not stop to prove it further, but take it for granted that secondary symptoms are always preceded by a chancre situated in some part of the body. It is no less true, however, that every chancre is not followed by secondary symptoms; were this not happily the case, they would be still infinitely more common than they are.

Predisposing Causes of Secondary Symptoms generally.—Observation of many thousands of cases shows that these consist in circumstances not immediately connected with the individual, or apparently dependent on his constitution.

It can not have escaped the observation of those of my readers who have seen much of syphilis, that the *temperature* of the air has a considerable influence on the production of secondary symptoms. Rapid changes from heat to cold, as witnessed in persons leaving the warm wards of hospitals for their own damp cold dwellings, place this beyond doubt. Travellers state that the passing from cold to warm,

and from warm to cold climates, produces a great disposition to the same effect.

Clothing, particularly such as is slight and insufficient to maintain an equable temperature, has been accused, with reason, of predisposing to secondary symptoms.

The use of *spirituous liquors*, *highly savored* or insufficient food, *excitement* of all kinds, *moral* or *physical*, are some of the most frequent predisposing causes.

Among the circumstances appertaining to the individual, we may first speak of *age*. It rarely happens that a child is born of a mother suffering under secondary symptoms, without becoming affected at birth, or soon after, particularly if exposed to cold. When the period of infancy has passed, as the child is seldom exposed to contagion, the occurrence of secondary symptoms is very rare. From similar circumstances, and the torpid state of the lymphatic system, they are rarely met with at an advanced period of life.

Sex.—It is hardly necessary to say that men are more liable than women, in consequence of the former exposing themselves to the chances of contagion more frequently ; but we think the statement is no less true, that if the same risks were run by the two sexes, the female is less predisposed than the male. This assertion is supported by the cases we have observed in the Parisian institutions. In the male hospital, cases of secondary syphilis are very common ; in the hospital of l'Oursine (the female one), during our duties there, out of four hundred in-patients, we observed few cases of secondary affections. The same remark we made in visiting the foul wards at St. Lazare, devoted to the treatment of the prostitutes of Paris. The reason, we think, is the following : the female, though frequently the subject of chancres, is yet, from her sedentary and quiet life, less exposed than the male to the causes mentioned above. We are further borne out by the fact, that common prostitutes are much more frequently attacked with secondary symptoms, than that large class of unfortunate females, consisting of poor married women, to be found at l'Oursine.

Temperament.—Its influence, as a predisposing cause, is very evident, and some authors state that the lymphatic is the one which most particularly disposes to them. That this is often the case is true, but those who have attended to the subject must be aware, that the same individual, in the course of the year, may contract chancres ; the first will pass away, the second may be often attended with secondary symptoms, or *vice versa*. Again, how often do we see the

strongest men attacked, and the feeblest escape ; it must, however, be allowed that a great portion of secondary symptoms occurs in persons who have been reduced by illness, or some other cause. Surgeons who are called upon to treat secondary symptoms can not but have remarked the number of their patients presenting that clear complexion which has been attributed to scrofulous subjects. I do not, however, assert that secondary symptoms are confined to such individuals ; but on being consulted for primary sores by patients with dark hair, clear brown complexions, or that beautiful transparency of skin, I have too often predicted the occurrence of induration, and the subsequent train of secondary affections.

The reader will not forget, that in speaking of the various anatomical characters of chancre, and of their prognosis, we stated that the simple chancre, as well as the gangrenous and phagadenic ones, were rarely followed by secondary syphilis ; on the contrary, that the indurated chancre would be attended by it in ninety-nine cases out of one hundred. We stated, however, that the virus being always the same, the difference in the form of the chancre must depend upon the nature of the constitution. What this may be, we are unable to say ; observation alone shows that the constitution or condition of surrounding tissues, or the unknown element which causes induration, is analogous to that which subsequently produces secondary symptoms. The importance of this, as indicating a line of treatment, has been already noticed, and further researches, it is to be hoped, will clear up these doubts. In the absence of anything certain, we will not speak of the conjectures which the subject has given rise to.

If secondary syphilis, in consequence of the predisposing causes above referred to, arise from absorption of the virus, *by what system of vessels does the process take place?* To this question we think observation may furnish a satisfactory reply. When the virus is taken up by the lymphatic vessels, as we remarked under the head of bubo, it is either carried along the vessel into the first lymphatic gland, or, being checked in its course, it occasions the development of a lymphatic or glandular bubo. We stated, moreover, that under either of these circumstances, the virus remained unchanged, as is proved by inoculation. What prevents its further progress ? Why can it not pass beyond the first gland, and what decomposition or change does the virus then undergo ? We are at a loss to decide, unless, as some have advanced, *the elements of*, and not *the virus* is absorbed. This view is not improbable, but is a simple hypothesis ; nor shall we inquire if a bubo be the means of expelling from the system the peccant

virus. One thing is certain, that bubo in no way betokens the probable occurrence of secondary syphilis. Often have we observed persons afflicted with the largest, most acute, or chronic buboes, without ever after being subject to secondary symptoms. On the other hand, we daily witness secondary syphilis coming on in persons who, we are certain, have never had buboes. It is true that the secondary disease often comes on during the existence or after the cure of bubo. In such cases, we think we are far from justified in attributing them to the bubo, as observation on a large scale shows that there is no direct relation between them.

If, then, our opinion be correct, that the lymphatic system does not absorb the virus, and carry it into the economy, we necessarily must suppose that absorption is effected by the veins. The experiments of physiological writers have clearly proved these vessels to be endowed with the function of absorption: veins, we believe, have no power of selection (if we may be allowed the expression), as the absorbents have, nor do they tend to alter the qualities of substances, as the lymphatics evidently do. Lastly, the effects produced on the system by the absorption of the virus bear a great analogy to the deleterious effects produced by the injection of poisons into the veins. At the present day the comparison is feeble, but in the fifteenth century, when that famous epidemic reigned, we learn that livid patches appeared, that the ulcers on the skin were hæmorrhagic; everything in fact bespoke a liquefaction of the blood, such as is occasionally witnessed even at the present day. In the absence of experiments, all must be conjectural as to the quantity, quality, and period necessary to produce the contamination of the system above alluded to.

The period at which secondary symptoms appear after the occurrence of the primary ones, deserves to arrest our attention. It is impossible to limit exactly this period. The earliest period at which they may occur, is eight days after the appearance of primary sores. M. Ricord relates such a case. It happened in a tailor, who, at the end of the week after the occurrence of chancre, had well-marked secondary symptoms. M. Cullerier has likewise mentioned a similar case. Excepting, however, such instances, which are rarely met with at the present time, although we believe them to have been very common in the fifteenth century, secondary symptoms usually show themselves about six weeks or two months after the appearance of the primary sore. Of the importance of knowing this fact we have been more than once convinced: patients come into hospital six weeks after the occurrence of an indurated sore; mercury is given, and in

a few days a brilliant display of secondary symptoms breaks out, occasioned, as some think, by giving mercury. M. Ricord has often shown us the natural course of the disease by abstaining from any treatment, and the well-known secondary affections soon appear.

Can this period be delayed? 'It can, as we have had ample opportunities of observing. When due precautions are taken, no excesses or exposure to cold submitted to, weeks may pass over, and no secondary symptoms appear; but, under the influence of predisposing causes, they suddenly break out. The employment of mercury in insufficient or injudicious doses appears to have the same effect; the disease is retarded, and we have seen it appear some months later, and have been unable to attribute it to any other cause. It results from the preceding observations, that the absorption of the syphilitic virus induces *a syphilitic temperament*, a peculiar state of system which care holds in abeyance; the germ exists, but some extraneous cause develops it, and must call it into action; as a fall on the knee, or inflammation of the chest, develops white swellings or phthisis, so does exposure of the surface to cold, or insufficient diet, cause the development of one of the forms of secondary syphilis, which we shall presently describe.

The length of time that this syphilitic temperament may exist without giving any evidence of its presence by the occurrence of the disease, we are unable to decide; but let it not be supposed that we belong to that school who think that secondary symptoms may break out twenty years after the cure of the primary affection; all we can say on this point is, that care and non-exposure to the predisposing causes, or an insufficient mercurial treatment (we shall hereafter state what we mean by this term), may retard the development of secondary syphilis. M. Ricord states that the exact period of this *suspension of the disease*, or *incubation*, can not be limited; but he has not met with a case which ever led him to suppose that syphilis can break out after a lapse of years; and as those who state that this has occurred do not furnish us with their observations, as the chances of self-deception are great, and as no such cases have been personally observed, without absolutely denying the possibility, he is little disposed to credit them.

In our definition we stated that the term secondary symptoms was employed to designate the morbid phenomena which appear on the skin, mucous membrane, eye, testicle, &c. Let us now direct our readers' attention to each separately.

The researches of modern anatomists have proved beyond a doubt,

that there exists a great analogy between the skin and the mucous membrane. Physiologists have likewise established analogy of function between them, and modern surgeons, in a variety of their rhinoplastic operations, have proved on the human body, what was long known to the comparative anatomist, that skin may be, as it were, transformed into mucous membrane, and mucous membrane assume all the characters of skin. Pathology daily shows that the influence of disease on the skin reacts on the mucous membrane, as in cases of burns ; on the contrary, that irritation of the mucous membrane reacts on the skin, as in eruptions following the use of copaiba, &c. In fevers, particularly in typhus, the co-existence of the rosy eruption, or of petechiæ, together with the lesions of the mucous membrane, have not escaped notice ; and in small-pox it is now well known that the pustules may appear on the mucous membrane, as well as on the skin. This analogy, then, between the diseases of the skin and mucous membrane is in no case more strongly marked than in secondary symptoms ; they may be traced on the penis and on the prepuce, gradually passing one into the other ; on the mouth we have often witnessed this transformation, and a good example is to be seen in Plate V., fig. 4.

SECTION II.

SECONDARY SYMPTOMS ON THE SKIN.

THE syphilitic affections of the skin are very varied and numerous, yet, by following the classification of our countrymen Willan and Bateman, we trust we shall give such a distinct and succinct description of them, as will enable our readers readily to distinguish this large class of important diseases from those which depend upon other causes.

Various as they are, they may all be reduced to one of the following forms :—

Exanthematous affections.

Papular affections.

Vesicular affections.

Pustular affections.

Tubercular affections.

By far the most common and earliest in appearance are—

EXANTHEMATA.—During the existence of the primary symptoms, or some few weeks after their disappearance, and generally in consequence of exposure to some of the predisposing causes mentioned above, the patient is surprised at observing a larger or smaller portion of the body covered with an exanthematous eruption, which sometimes assumes the form of measles ; so general is the affection of the skin, at other times, distinct patches appear, of a more or less circular form. At their commencement these eruptions are of a rosy color ; the surrounding skin is of an unhealthy appearance, of a dusky yellowish hue ; on pressure the spots disappear, but return immediately.

The whole surface may be covered at once, or successively : this exanthematous eruption may pervade the abdomen, lower extremities, arms, face, and back. It may disappear from one part and shift to another, or reappear again on the same portions of the body in a few days. These spots, however, soon lose their rosy color, and daily become more and more dusky, until they assume a coppery hue, which is always best marked in the most dependent parts of the body ; it seems to arise from something more than simple congestion, as pressure does not remove it.

These exanthematous eruptions may disappear without any treatment, or under the use of various agents, or may pass into the papular form.

PAPULÆ, like the exanthemata, may appear on the skin without having given rise to any general disturbance of the system : often, however, the general health may be observed to suffer ; the face may have presented an unhealthy, pale, or earthy appearance ; the eye may have lost its vivacity, and the patient loses flesh : these premonitory symptoms are sooner or later followed by an eruption of papulæ, more or less general ; they, however, first usually appear on the abdomen ; at their commencement rosy, they gradually assume the coppery hue. On passing the finger over the affected parts, they will be found to present a certain elevation above the surface of the skin, with a sensible hardness, and are grouped in clusters, or disseminated irregularly here and there ; it is this condition of the papulæ which has received the name of *lichen*.

It may exist as a simple disease a long time, or it may disappear, as did the exanthemata, or the points of the papulæ will become dry and whitish, the base will shrivel, and, instead of a papula, a surface covered with little thin scales is seen, very distinct from the adjacent

sound skin ; these scaly surfaces may be quite distinct, or several may coalesce, forming a continuous surface, covered with silvery scales, which are reproduced as soon as they fall away, or are rubbed off. This appearance has given rise to the division *squamæ*, but which we believe to be no other than the drying and exfoliation of the epidermis, and reproduction of little silvery scales on the papules (See eruptions in plates VI. and VII.)

Those who have specially written on skin diseases, have, as it appears to us, rendered more difficult an acknowledged difficult subject ; they have attempted to create distinctions between *lepra* and *psoriasis*, which, in our opinion, are both terminations of a papular eruption. The *lichen* above described may become dry at its summit, scales may form, fall off, and be reproduced, and this process may gain the base, and extend itself in an irregular manner, constituting what authors call *psoriasis*. On the other hand, the base of the papula may become scaly, the centre or apex remaining in a natural condition ; the result is, that a circle is formed of these little scales surrounding and surrounded by healthy skin, and as this circle is somewhat prominent, from a slight swelling of the dermis now secreting the scales, it has been considered sufficiently characterized to be termed *lepra*. On the same individual, *lichen*, *psoriasis*, and *lepra*, may be seen ; and we may here observe that the little white border, described by M. Biett as characteristic of the syphilitic affection, is often wanting.

This scaly state of the diseased skin is very often exceedingly rebellious, remaining for a long time stationary ; the progress of the *circles* deserves, however, particular attention. As they extend at their circumference, the centre heals ; thus the circle enlarges, until it has reached the size often of a shilling ; the regularity of the circle is often interrupted by the fusion of a second one, and thus two become united, forming a figure of 8, or 3, or 5. When they are about to heal, the scales fall off, and instead of the white scaly surface, the circle is only to be distinguished by the difference in the color of the skin, which, after a lapse of time, assumes all its healthy characters. A good idea of this may be derived from plates V. and VII.

There is a form of lepra occurring on the palms of the hands and soles of the feet, which deserves particular attention ; portions of the epidermis, of a circular shape, become white, hard, or horny, and fall off, but are soon replaced by others, which successively fall away, causing great inconvenience to patients. This condition of parts is

often accompanied with crevices, or a chapped state of the interstices, which become irritated by any foreign substances that may be placed in contact with them, and they pour out a secretion which forms crusts upon the surface ; in fact, the palm of the hand becomes so horny, that the patient is in part prevented from making use of it. We have observed this variety particularly in bakers, grocers, masons, &c. We have every reason to consider it a form of lepra, which takes on this character from the condition of the epidermis in these situations.

VESICULAR FORM.—This variety of syphilitic eruption has never presented itself to our observation. M. Ricord states it is of *very rare occurrence* ; it resembles any other vesicular eruption, such as chicken-pox, but is more chronic in its progress, and surrounded with a coppery tint, and patches of discolored skin remain after the absorption of the limpid fluid contained in the vesicle.

PUSTULAR FORM.—Our readers will be much deceived, if they suppose that by the term pustular form we wish to speak of an acute affection of the skin, such as is found in small-pox, attended with full-formed pustules filled with a yellowish fluid.

Such cases have rarely come under our notice ; most frequently pustules follow as a sequel of other eruptions, bad treatment, want of proper attention to cleanliness, or some other cause ; and at a later period, after the occurrence of the primary sores, a yellowish serum, which soon becomes thick and consistent, is seen raising up the epidermis on the centre of the various eruptions previously described ; the pustule does not put on the characters seen in the pustule of the drawing of artificial chancre ; it is often covered at the commencement with scales, and then seems to be the result of an inflammatory action beneath the spot of lepra. In other instances, it seems developed in a papula, which becomes converted into an organ secreting pus ; scabs form upon it, which increase in diameter in consequence of the additional secretion of pus, becoming hard, brown, and surrounded by a livid or copper-colored areola ; these scabs may assume a monstrous size, being at their base as large as a shilling, and projecting above the skin at least half an inch ; on removing these masses of scabs superimposed one above the other, and often covering large portions of the body, a dirty, sanguous, and ulcerating surface will be observed occupying their base ; the edges are often callous, and extend underneath the epidermis ; hence the ulceration is larger than it at first sight appears to be. This form of eruption is usually very chronic in its course, and shows little disposition to

heal ; the ulcerations remain for a long time stationary, or when they show a disposition to heal, cicatrization takes place slowly ; a livid condition of the skin succeeds, a material loss of substance is evident, and white cicatrices are the result.

It is especially under these forms that the general health suffers ; the skin is dusky, the countenance is shrunken, the capillary circulation is imperfectly performed, nutrition goes on badly, purpura often supervenes ; general prostration of strength, together with loss of appetite, and rheumatic pains, indicate that the constitution is severely suffering, and it is not until the health improves that the sores heal. It was probably under such severe forms as these that the epidemic of the fifteenth century showed itself, but it is happily only from time to time that we now see this disease in persons of bad constitution, or who have ruined their health by excesses.

It is to this form of scab that the term *rupia* has been given, which, as we have seen, is merely the consequence of the formation of scabs ; however, there is another form which we have occasionally witnessed under the same circumstances ; large *bullæ*, containing at first a thin, serous, and then a sanguineous fluid, of a most fetid nature, based on an ulcerating surface, are seen on various points of the body ; they form crusts, and follow the same course as the disease last described ; they indicate a more impoverished condition of the system than even the pustular form, and are often attended with serous or sanguineous effusions into the various cavities of the body.

Before quitting the pustular form, we must not omit mentioning a variety which occurs on the scalp, and which we call *impetigo* ; it apparently commences at the bulb of the hair, showing itself by a small pustule ; a crust is formed around the root of the hair, which, as often as rubbed off, is reproduced by a thick viscid secretion matting the surrounding hair together ; this condition of the scalp is usually confined to a few spots, but the whole hair becomes affected, loses its lustre, gets dry, falls off, and the patient may become bald. The glands in the neck may often be sympathetically enlarged, particularly those behind the ears and at the base of the jaw ; it often accompanies the other forms of secondary symptoms.

TUBERCULAR FORM.—In describing the previous forms, we have followed what we believe to be the most natural course, that of successively describing those eruptions which succeed one another. Following the same plan, we ought to have described the *tubercular* form after the *papular* ; but the following reasons have induced us to leave the tubercular form to the last. If the reader will carefully

examine plates IV. and V., he will observe the transformation which insensibly takes place between the diseases of the skin and mucous membranes through the tubercular form, and consequently, we have reserved the description of it, that our account of the one should immediately follow the other, although at the expense of subverting the order we have previously traced out.

The *tubercular form*, in the sense which it is used by writers on the diseases of the skin, viz., "consisting of little hard tumors more or less superficial, accompanied, most frequently, with a peculiar color of the skin ; capable of resolution, or remaining in an indurated state ; or, lastly, becoming the seat of ulceration—in the latter case crusts form on the surface," is rarely met with as a distinct form ; it is more frequently a papular eruption in the beginning, and after a greater or shorter lapse of time it degenerates into a tubercle, having the characters above described ; it appears on various parts of the surface, and may be often seen on the face, nose, or at the angles of the mouth, but more frequently shows itself soon after the primary sore on certain parts of the body, to which it appears to have a preference such as around the anus, the labia, the groin, the scrotum, the lining of the prepuce, the umbilicus, between the toes, and, lastly, though very rarely, in the arm-pits. (See plate VII.)

This peculiar form of *secondary syphilis* has been more particularly described by the French writers ; as it is of frequent occurrence, is very characteristic, and has not yet been paid sufficient attention to in England, we shall dwell at some length on it.

The French call it *tubercule muqueux, papules muqueuses*, or *pustule plat* ; for reasons which will soon appear, we shall call it *mucous tubercle*, although in England it is called *condyloma*.

The reader may form a very clear notion of it from plate VII. In appearance it will vary according to its situation ; usually of a more or less circular form, it presents a slightly firm tumor, rather elastic than hard, more or less elevated above the surface of the skin ; at first it is pale, but, exposed from its situation to friction, it becomes shortly of a vermillion tint : the surface is somewhat similar to a mucous membrane ; it secretes an acrid matter, which causes and maintains great local irritation, and is of a very offensive odor ; the epidermis which covers it becomes excoriated, and the tubercle may present the appearance of a blistered surface, as is well shown in plates IV. and V. The mucous tubercle may be isolated, as I witnessed lately in a female under Mr. Lawrence's care, who presented one in the axilla, and gave the only intimation of secondary symp-

toms ; frequently, however, they occur in groups, and then the secretion of one irritates the other. Our plate shows a severe case, but we have witnessed examples in which a large portion of the thighs, as well as the whole external organs of generation, vagina, and neck of the uterus, have been entirely covered with a crop of tubercles, attended with such local irritation and offensive smell that the female presented the most disgusting sight we have ever witnessed ; of course the rubbing of one part against the other caused pain, but the general health seemed little affected. By inattention to cleanliness this disease has a great tendency to extend, but when care is taken to wash the parts and prevent the accumulation of the secretion, the affection will remain stationary. Under proper treatment this disease gets rapidly well, but when left to itself it does not seem to have any tendency to cause ulcerations which, like those following the pustule, extend in depth ; here there seems a tendency to superficial excoriation, rather than ulceration. The process of cure is somewhat singular : like lepra, to which it bears a close resemblance, the centre first shows marks of healing ; as cicatrization takes place in the centre, the excoriating margin, which is elevated above the surrounding skin, extends until it has assumed the size of a half-crown, and it may then suddenly stop and the circle get rapidly well, but for a long time after a livid purple or coppery-colored spot remains, and affords the only vestige of the disease ; such was the case in the instance of the woman above cited. The circles may intersect one another, giving rise to various varieties of cicatrization.

Such are the *course* and *termination* of the mucous tubercle ; it, however, often presents varieties, as we shall now proceed to describe. Instead of beginning as we have just shown, it may arise on any point of the body which has been the seat of chancre, and which is irritated and moistened by the secretions of the parts ; we have witnessed such an origin at the base of the penis or the scrotum ; M. Ricord calls this a change of *chancre in situ* into the mucous tubercle. It appears, likewise, that a chancre on one part of its surface may be converted into a mucous tubercle, while the other may continue to secrete the virus. Such cases as these have led to the notion that the mucous tubercle is contagious, but from the experiments of M. Ricord it is now satisfactorily proved that, unless under these circumstances, mucous tubercles can never be transmitted from one adult to the other, notwithstanding all the attempts that have been made. The chancre, when it has lost its virulent character, and is covered with granulations, may, under any irritation, take on the character of the

ulcus elevatum, as we mentioned at the commencement of this part ; it will then be very difficult to distinguish it from an isolated mucous tubercle ; but this is of no great importance.*

COMPLICATIONS.—We have thus described the whole of the symptoms of the skin called secondary ; the reader would, however, be in error did he believe that they are always to be met with in the form we have described them ; instead of one form being present, it happens occasionally that various parts of the body may at the same time be the seat of the varieties described as papular, pustular, or tubercular ; as a consequence of various complications, the characters of the eruptions may be modified. We have frequently had occasion to observe the various affections called secondary masked by a general *eruption of itch*, for the idea that two diseases can not exist in the economy at one and the same time has long since become exploded, and we now say that itch is a complication of syphilis, and no longer believe in a syphilitic itch.

From any local irritation *eczema* may break out on the surface, and the consequence will be, that this acute affection of the skin will for the time throw into the background that which depends upon syphilis. We have often witnessed a general eruption of *Urticaria* coming on during the progress of papular syphilitic eruptions.

When lepra and psoriasis are habitual to some individuals, should secondary symptoms supervene, of course that depending upon syphilis may be much modified, and its distinctive characters lost ; we have, moreover, witnessed the train of eruptions which attend the French typhus fever superadded to and aggravate the secondary syphilitic affection ; in fine, there is no disease which may not supervene, and alter materially the characters of secondary symptoms.

As the reader, however, is now aware how much depends upon the syphilitic constitutional disease, he will be enabled to avoid falling into the error of calling everything syphilitic which comes on after a primary affection.

There is, however, a complication which deserves particular attention, and which, if not recognised, leads sometimes to the gravest errors ; we speak of the occurrence of *primary symptoms*. Should a *primary sore or chancre* exist, or should chancres be contracted while the system is laboring under the constitutional form of syphilis, it is

* I believe this transformation *in situ* of the chancre into a mucous tubercle is a form or variety first described by Evans in his "Practical Remarks on Ulceration of the Genital Organs," under the term *Venerola Vulgaris, aut Ulcus Elevatum*, and more recently by Mr. Skey, in his lectures reported in the Medical Gazette. Our view of its nature, however, is very different from that taken by these gentlemen.

hardly to be called a complication, provided the chancres be confined to the genital organs. But if the ulcerations or pustules, the consequence of secondary symptoms, become inoculated with the virus proceeding from chancres existing on the genital organs, or on any part of the body, such accidents may be justly called complications, for we may have secondary and primary symptoms existing on and covering the skin. We have been witness of these facts more than once, and we think them worthy of general attention. It is probably such instances as these which have induced the late Mr. Wallace of Dublin to believe secondary symptoms occasionally inoculable.

If, however, the possibility of secondary symptoms becoming primary once, through the direct contact of the virus coming from a primary sore, be now put beyond a doubt, the reader must not imagine that this frequently occurs, or that every suspicious ulceration which follows secondary symptoms is, in fact, a primary sore or chancre : we have lately witnessed a case which proves how much the surgeon may be deceived. In M. Puche's wards at the Venereal hospital, a patient had a very severe form of pustular secondary symptoms, the consequence of chancres cured, as the patient stated, some months before. On examining the patient some days after, we found several serpiginous sores of the size of half-a-crown crowded together on the back of the shoulder, a point of the body where we had previously observed the large pustules before spoken of. Every one who saw these sores agreed that they had a most suspicious appearance ; they resembled perfectly a large chancre. The supposition that they were chancres was, moreover, borne out by the existence of primary sores on the penis, the consequence of connexion a few weeks previously. Inoculation, however, proved that these sores on the back were not primary, but truly the result of secondary symptoms ; this case has, however, impressed more fully than ever upon us the little confidence that can be placed upon physical characters to distinguish primary from secondary ulcerations.

Before quitting the subject of *complications of secondary ulcers*, we must not forget to state that *scrofula*, *scurvy*, as well as any inflammatory affection, may completely alter their physiognomy, as well as materially modify their prognosis.

DIAGNOSIS.—We shall, in this section, attempt to give a *résumé* of the general points in the diagnosis which have been mentioned in the preceding pages, believing that by this means the reader will gain a clearer notion of the subject ; it will, moreover, enable us to make

a few observations which could not consistently find their place in the simple description.

In forming a diagnosis on any supposed secondary symptom, the surgeon will, of course, never neglect to inquire *into the previous history* of the patient; this will aid him materially, but let it be remembered that, unless care be taken, it may tend equally to deceive him. It is not only necessary that a chancre has preceded, but that it should have occurred within a certain length of time, otherwise the relation between the cause and effect is not apparent. There are persons, who, when they find that chancre has ever existed, consider every morbid symptom during the life of the individual as due to that cause; we have above stated that this is not our opinion.

When we learn that no chancre, but only gonorrhœa, in the male or female, has preceded, provided other reasons indicate it, we may often suspect that chancres have escaped the patient's notice, daily experience demonstrating that chancre may exist in the urethra in the male, or in the vagina or neck of the uterus in the female, and yet only give notice of their presence by leucorrhœa. Hence we must not rashly conclude, that although a chancre has existed, the *symptoms* under which a patient is laboring are syphilitic or secondary; or when no primary symptom, but only a leucorrhœa, has been observed, deny the symptoms which bear the mark of syphilis to be really specific, because they are not corroborated by the patient's antecedent history.

The next point upon which the surgeon will form his diagnosis is the occurrence of *concomitant* symptoms, or, in other words, upon the existence of other symptoms which are more characteristic. Let us take an instance: if he be doubtful of the nature of lepra, or psoriasis, or any pustule or ulceration, his opinion may be often confirmed or corroborated by the existence, on other parts of the body, of the papular lenticular eruption, or by the presence around the anus, or elsewhere, of the mucous tubercle, as these eruptions are peculiar to syphilis; hence their presence or absence must have great weight in aiding the diagnosis.

In tracing the various forms of secondary symptoms, we had frequently occasion to notice that they often presented a peculiar *dusky or coppery hue*, and this is by some authors considered as characteristic; when present, it may aid us very materially, but it should likewise be borne in mind that it may accompany any other affection quite foreign to syphilis, and thus deceive the most experienced eye; when this copper-colored appearance is absent, the eruption may still

be syphilitic, as at their origin almost all secondary symptoms are not accompanied with this livid tint, which only exists when they have lasted some days or weeks.

Little dependence can be placed on the mere *circular shape, color, or thickness* of the *scabs*, but, taken with other characters, they may assist the surgeon in arriving at a just opinion.

Data on which to form an opinion have been taken from the treatment by mercury, which, both in primary and secondary affections, was considered as the touchstone. We shall return to this point in speaking of the treatment; but we may here add, that although mercury be of the greatest benefit, still secondary syphilis can be cured without it, and that, under certain circumstances, it will fail in curing some forms.

To sum up, then, the surgeon, aware of the difficulties which beset the subject, must be guided by circumstances; a knowledge of the disease will often cause the judicious practitioner to be in doubt, where a less practised one would at once condemn or acquit. Doubt is sometimes the result of knowledge; here hesitation can do no harm, as time will usually clear up doubtful points, and a rational diagnosis will only wait for further proofs to convert it into a positive one. This must be always the case, until some one gives us a boon, like inoculation, to distinguish with certainty what depends upon primary sores, and what on secondary.

PROGNOSIS.—When we see an otherwise healthy individual, soon after the occurrence of secondary symptoms, which have broken out a few weeks succeeding the cure of chancre by simple local means, we may usually promise him a speedy cure, provided he will, for a few weeks, take those precautions which we shall hereafter recommend. We may truly say that there are few affections which get well so rapidly, and yet which, when left to themselves, produce such serious consequences. But too often our prognosis is not of this cheering nature; the individual we have to treat is a debauched character, his constitution is impaired by poverty, or some disease foreign to syphilis; he consults us at the latter stages, when already the complaint has existed many months, or when it has followed the injudicious use of mercury for primary sores, so that the system is impaired, the bowels disordered, and there is a distaste for the further employment of the mineral. Lastly, when the patient will not submit to any fixed plans of treatment, but is determined to pursue his pleasures; when he exposes himself to cold, and commits all kinds of excesses—then must our prognosis be unfavorable; and it would

be well for the surgeon, could he avoid altogether patients of this description. As we spoke of the prognosis under the head of each form of secondary syphilis, as well as under that of complications, we think it unnecessary to revert to these points, but shall pass on at once to the consideration of the

TREATMENT OF SECONDARY SYMPTOMS.—Had we not already described the means of *prevention*, we should have recurred to it here; but enough has been said under the head of chancre. By taking precautions against the occurrence of chancre, we necessarily prevent secondary symptoms, which are one of its consequences.

If we are, or should be, so solicitous to prevent chancres, we ought likewise to be equally anxious to curtail their progress; to strangle the disease, as the French call it, while it is still local, and by all the means in our power counteract those causes which we have stated to be the predisposing ones; these are means which must occur to the most superficial observer, and the best plan of carrying them into effect we must leave to his judgment, thinking it would be futile to mention them. By the most simple precautions, then, the occurrence of secondary symptoms may be often prevented—an object heartily to be desired.

Under the head of Prognosis of Chancre, particularly that of the indurated form, the reader will find this subject treated at length; and that the employment of mercury is recommended, not only as a cure for the induration, but likewise as a preventive against secondary symptoms. The reasons why mercury is useless for the same end in other forms, is likewise there fully explained.

Should, however, all our means of prevention fail, or if we are consulted when secondary symptoms have already appeared, it will be our duty to direct our attention to the

CURATIVE TREATMENT that medicine offers. In these cases the first care of the medical man is to remove, as far as lies in his power, all the predisposing causes, or all such as may keep up or be likely to aggravate the disease. Similar attention should be paid to the complications, which must be treated on general principles; in fact, let secondary symptoms be reduced to their *simplest expression*, as the French say. Had this principle been always kept in view, we feel assured that humanity would have had cause to rejoice. Should any severe complications exist, let the original disease be lost sight of for the moment; there is no hurry to treat it, more especially when other and more urgent symptoms exist; but, above all things,

let us caution our readers against believing that at this stage a specific treatment is required ; unfortunately, syphilitic patients have been too often treated on exceptional principles, and the non-observance of the ordinary rules of medicine have led to the worst consequences.

Although we are not pupils of the non-mercurial school, still we must render it the credit of having impressed on surgeons the necessity of treating syphilis by simple means ; it is true that its disciples have been led into exaggeration ; that they are unable to maintain what they advanced ; but science is much indebted to them, and this same exaggeration has been perhaps of great use ; and Mr. Rose, if he now lived, would perhaps allow that he purposely exaggerated the employment of simple means.

Should our patient be plethoric, blood may be taken from the arm ; if he has been exposed to privations, let his diet be mild or generous ; if his digestive organs are impaired, let them be attended to, and then let his diet be regulated according to his constitution and previous habits.

As long as any of the acute or severe complications exist, the surgeon need not turn his attention to the specific diseases, which will be found to have diminished very materially in intensity. Many persons believe that by the most simple treatment the specific disease will altogether disappear. That there is much truth in this statement we have every reason to believe, but the sword of Damocles is suspended over the patient's head, and he is exposed to a recurrence of all his symptoms, after a shorter or longer time, with redoubled vigor ; and granting that they disappear slowly, they reappear speedily and severely. Such are the reasons which induce us to agree with the followers of Broussais in some, but to differ from them in other points. During the time that we are treating the secondary symptoms, it should be our intention to eradicate from the constitution any syphilitic tendency. To the description of the proper means of doing this, we shall devote the following pages.

BATHS.—When the extent of the skin is considered, and when we reflect on the influence that a due performance of its functions must have on the economy, we are not surprised at the effects that baths may produce, not only on skin diseases, but on the system at large. Those who have followed the practice at the Hôpital St. Louis, must well remember the success which attended the treatment of M. Biett, but they must have been equally struck with the quantity of baths which he ordered in that establishment, which furnishes many thousands annually. The advantages to be derived from them is

daily being appreciated in England, but their exorbitant price will, we fear, prevent them from being generally employed.

When there is no irritation of the skin, the tepid bath is alone requisite, and it may be repeated twice a week. When, however, there is a determination to the skin, or any acute affection of the general integument, we should strongly recommend that a pound or two of gelatine be added, and that the patient remain in the bath half or even three quarters of an hour every other day, and this space of time may be gradually increased to two or three hours; the temperature being kept up by the addition of warm water, or by covering the bath with a blanket.

In the *papular* eruptions, and particularly in *lichen*, one or two pounds of *subcarbonate of potash* may be added to the bath with the greatest benefit.

In the more chronic forms, when, instead of allaying inflammation, it is our object to excite the action of the skin, particularly in cases of *lepra* and *psoriasis*, the addition of half an ounce of corrosive sublimate, gradually augmented to two or even three ounces, will be attended with good effects; but this remedy must never be used when any ulcers are present, as its poisonous effects are of the worst description.

Equal benefit may be derived from the use of a bath in which is dissolved the *sulphuret of potash*; should much irritation result, gelatine or bran may be added.

The state of the bowels likewise must be attended to. We have more than once alluded to the sympathy existing between the stomach and the skin; constipation should be removed by gentle aperients, but the employment of brisk purgatives ought to be avoided as highly prejudicial, particularly if the surgeon has the intention, at a later period, of giving mercury.

The pharmacopeia contains a variety of substances which are supposed to have an action on the skin, and to produce *diaphoresis*. Such are *sarsaparilla* and *guaiacum*; the diet should be light, and, to produce the beneficial effects expected, the patient should keep his bed during their administration.

We shall not here speak of the advantages that *iron*, *quinine*, or *opium*, may offer in persons of scrofulous, feeble habits, in curing nocturnal or rheumatic pains.

Treatment of the Secondary Symptoms by Mineral Preparations.—
Having never seen the various preparations of *gold* employed, we shall avail ourselves of the remarks of M. Ricord on this subject.

In secondary symptoms, gold is the remedy on which the least dependence can be placed. The greater part of the symptoms reputed to have been cured by its preparations are far from bearing unequivocal marks of the constitutional disease of syphilis, and when they are given in well-characterized cases, or under circumstances when the other means, and particularly mercury, have failed, I am doubtful whether any benefit derived has not been rather due to the suspension of mercury, than to the administration of gold.

Gold, then, and its preparations are, in my opinion, a means to be employed when nothing else can be done. As this is my personal opinion, it can in no way affect the interesting researches published on the subject.

The preparations of silver, under all the forms I have employed them in, according to the indications given by Professor Serres of Montpellier, have appeared still more uncertain in their effects, as those who have followed my hospital practice can testify. When employed against primitive as well as constitutional syphilis, beginning by small doses, and increasing them gradually up to the enormous dose of sixteen grains daily, I have been unable to produce other effects than irritation of the digestive organs, a consequence which has induced me to abandon its use.

Mercury.—The employment of mercury in its various forms, for the cure of syphilis, is not of modern date; the advantages of its preparations were for so long a time recognised, that it was heresy to doubt their efficacy, and it was the remedy employed to the exclusion of all others; but that its administration was always followed by success, admits of some doubt. However, the necessity for employing this mineral was admitted on all hands, syphilis and mercury went hand in hand; and even in works of the present day we find it stated, that when mercury does not produce its beneficial influence on the disease, the latter is of so rebellious a nature that no fault ought to be found with the preparation; that it should be persisted in, and the quantities employed should be in proportion to the severity of the disease. However, as observation became more accurate, a few hardy practitioners (many of which do honor to our own country) began to throw doubts on the advantage of its universal administration. This opinion found at first little credit among practitioners generally: in vain were the lamentable accidents of loss of portions of the face cited as proofs of the inefficacy of mercury in controlling the disease; a bad constitution was assigned as the cause, and converts to the new doctrine followed slowly. 'Truth, however, here as else-

where, prevailed over prejudice ; it began to be admitted that mercury would not cure all cases of syphilis, and it was asserted that the remedy was not even necessary. In proof of these assertions, the practice adopted in various countries was cited, and history showed that the disease had been cured without mercury for many ages. Two doctrines now prevailed ; the one absolutely declaring that mercury was the *sine qua non* in the treatment of syphilis ; that the cases said to have been cured were not those of true syphilis, but a bastard complaint, having some points of analogy with it ; and that in the cases of true disease, where the remedy failed, it had not been employed in sufficient quantities. The other doctrine continued to gain ground, viz., that syphilis could be cured without having recourse to mercury ; that this supposed remedy was more prejudicial than useful ; that it caused all the mischief which it was intended to cure, and should therefore be excluded from all judicious practice. In consulting those authors who have written on syphilis during the present century, this opinion is the most generally received, notwithstanding that many of those upholding the opposite doctrines are in high favor with the public. In face, however, of these opposite opinions, backed by names of great authority, the *eclectic school* arose ; on the one hand, they admitted that the administration of mercury was often attended with advantage ; history and daily practice proved this ; but, on the other, they held that syphilis was capable, in many instances, of being cured without mercury, and yet the patient never suffered from the ill consequences said to depend upon a non-mercurial treatment. Not contented, however, with these generalities, the eclectic school began to observe the natural history of the disease, and carefully note what were the cases treated by simple means, which got well without having recourse to mercury. The same clinical investigation enabled them to watch those cases which resisted simpler means, and which improved immediately under mercurial preparations ; they too first pointed out the injurious consequences of mercury, under what circumstances it occurred, as well as the means of cure. It is to this school we belong, and it is clinical observation, founded on and supported by the opinions of others, which forms the basis of the treatment of syphilis by mercury, to which we now call the attention of our readers.

When the means previously described are made use of in *secondary symptoms*, the major part will disappear ; this, however, will take place very gradually, and many symptoms will persist, in spite of all we can do. When even they yield and disappear, they frequently

return either in the same situation, or break out again after a short interval, and often in an aggravated form, on exposure to any of the predisposing causes ; thus we have every reason to expect, that although the local disease be cured for a time, the general infection is not removed ; in fact, the syphilitic diathesis remains ; and when the flame again bursts out, it is no longer so amenable to our means of repressing it. These are our reasons for considering the other means of treatment as valuable adjuncts, but do not induce us to place implicit confidence upon them, especially when we consider that we possess such a valuable medicine as mercury, which, given under proper restrictions, seldom produces any unfavorable symptoms or effects which we can not always remedy or prevent.

There is no age or temperament which counter-indicates its use ; the sex does not prevent us employing it, although there are circumstances which should render us more circumspect. In relation to the period at which mercury may be employed, experience shows that the sooner after the occurrence of the disease the more efficient it is, and the less likely is it to return ; for once it has gained a right of possession, the more difficult it will be to expel it from the constitution : neither climate, nor the state of the season, need deter us from its use. When mercury is used, it should be employed for a specific purpose, and we should only leave it off when that has been gained, or on the occurrence of any of the ill effects to be mentioned hereafter. When the symptoms which it is our intention to combat improve under its use, the plan and the dose we employ should not be augmented, but steadily persevered in. Should the disease remain stationary, the dose may be augmented, or, should circumstances require it, the preparation may be modified ; the surgeon, however, must be guided by individual cases, as there is no form or dose applicable to all constitutions.

On the action of Mercury in curing secondary symptoms, theories have not been wanting ; but in the present day we believe it far more useful to watch carefully its effects on the system, than to bring forward hypotheses as to whether it decomposes the virus in the blood, &c. On one point observers are pretty generally agreed, viz., that the exaggerated effects of mercury, such as fever, diuresis, diarrhoea, irritation of the skin, salivation, or certain nervous affections, are never beneficial, but should be carefully watched for and avoided. Before proceeding further, let us call the reader's attention more particularly to some of these, and especially to

SALIVATION.

On this subject we can not do better than extract the following admirable description from the work of M. Ricord :—

“ Salivation is a rare occurrence previous to teething, as mercury up to this period acts rather on the digestive organs, or on the skin. It occurs readily in females, in persons of lymphatic temperaments, in scrofulous habits, and especially in persons predisposed to scurvy ; in fact, we observe it in all those who appear to possess blood deficient in plasticity. Habitual constipation and decayed teeth especially predispose to it. Changes of air, particularly when these occur suddenly, have a tendency to produce it. Soluble preparations of mercury excite salivation more easily than those which are insoluble.”

The quantity of mercury necessary to produce it is relative to individuals.—Salivation usually occurs during the first week of the administration of the mineral, and may follow twenty-four hours after the first dose, more commonly after the fifth day. It is liable to occur after every augmentation of the dose ; but when salivation does not occur at the commencement of the treatment, it has little tendency to set in at a later period.

When salivation has not appeared eight or ten days after the suppression of mercury, its occurrence is not to be dreaded. Cases of this nature may justly be attributed to ulcerative stomatitis, which may be readily mistaken for that which is caused by mercury.

Mercurial Salivation, Mercurial Stomatitis, or Ptyalism, does not commence in the salivary glands ; at first they are but sympathetically affected, as has been proved by pathological anatomy. The augmentation in the quantity of saliva is the first symptom which strikes the observer ; but it is the mucous membrane which is primarily affected. The latter becomes partially or generally swollen, and is affected with inflammation, partaking of the œdematosus and erysipelatous characters. The patient perceives a feeling of heat and redness, as well as a coppery taste in the mouth ; the teeth are raised in the gums, moveable, and seem to the patient to be separated by some foreign body ; he believes that they are longer than usual ; the tongue swells, and this sometimes occurs to so great an extent that it is incapable of being contained in the mouth, and may receive indentations from the teeth. The gums and lips likewise swell, and the mucous membrane may become tumefied in the interval between the lower and upper jaw. In proportion as these symptoms are

aggravated, so is the saliva found to be viscous and abundant, and to have what is called a mercurial smell,* a sort of metallic odor, that may be perceived to some extent in other inflammations of the mouth, but which in these cases is very well marked, and which may be found previous to the occurrence of ptyalism.

Wherever the swollen mucous membrane is pressed upon, ulcerations, which are very much disposed to bleed, succeed to the black pseudo-membranous exudation on the gums ; this appears to be the result of gangrenous or diphteritic inflammation. As the disease advances, the tongue may become gangrenous in particular portions, or in its totality ; the mucous membrane of the gums may be sphacelated, so that, when cicatrization occurs, the mouth is closed ; the cheeks may be completely laid bare, the teeth fall out, and the bones become carious or necrosed.

Nevertheless, except in cases of a systematic obstinacy, at present unpardonable, from rashness in the treatment, or under circumstances of idiosyncrasy, which are very rare, severe cases of salivation are so uncommon that I have seldom the opportunity of showing one at my clinique, at the Venereal hospital, during the course of the year. More commonly the salivation is partial, or becomes so as soon as it is noticed, and when we can check its progress.

The lower gums first show indications of the affection, or it appears on the mucous membrane around the *dens sapientiae*, more particularly when it pierces late. The gums of the upper jaw subsequently become affected, particularly such as are placed behind the middle incisors ; the borders of the tongue, the cheek, and internal part of the lips, become attacked at a later period. The palate and back portion of the mouth seem to establish a boundary to the affection which is seldom passed, except in very rare instances. An observation that I have made repeatedly, and which I leave for future observers to verify, is, that partial salivation is most frequently observed on that side of the mouth on which the patient lies.

Salivation is rarely preceded by fever ; the primary symptoms are those observed in the mouth ; but fever, though absent in the majority of cases, may, nevertheless, attend it, particularly in the severer cases, and may continue under a hectic form, when the patients have severely, and during a long period, suffered. In addition, other symptoms, such as sleepiness, swelled face, erysipelas, enlargement

* In the twelfth number of the *Expérience* for 1837, will be found some curious investigations of M. Gmelin, which prove that mercury is present in the saliva. I have repeated these experiments without success.—P. RICORD.

of the glands of the neck, affections of the stomach or intestinal canal, œdema of the glottis, and all the direct or sympathetic consequences which flow from them, may occur.

Salivation usually runs its course rapidly, and attains its height in a few days ; but provided the employment of mercury be persisted in, or even when the disease is left to itself, or when it is kept up by certain accessory causes, such as certain scorbutic affections which have pre-existed or determined it, it may assume a chronic form, and last an indefinite period. However, in the ordinary run of cases, when the cause which gave rise to it has been removed, and a proper treatment been employed, seldom do we observe it last many weeks, and most commonly we can check it in a few days.

Salivation frequently terminates in a rapid resolution, more commonly ulcerations follow, and gangrene sometimes succeeds. Death may result as a consequence of mortification or weakness brought on by vast suppuration ; by the excessive flow of saliva ; or from the absolute impossibility of the patient's taking nourishment : such, however, at the present day, very rarely occurs.

The *Diagnosis* is usually very easy. When the symptoms above described immediately follow a course of mercury, it is to this mineral that we may reasonably attribute them. Mercury is, in fact, the best touchstone of salivation, as the disease increases if it be continued, and gets rapidly well when the preparation is altogether omitted. If some few syphilitic symptoms in the mouth happen to be aggravated by its use, the greater part rapidly improve under the use of this powerful agent ; while it always augments, and never cures, those affections which it has itself produced. If, on the other hand, we take into consideration the situation of the syphilitic lesions of the mouth and throat, their distinct character, their chronic course, the freedom from the œdematous or erysipelatous state of which we have spoken, accompanied, as they are, with an induration very different from that puffy state of the mucous membrane depending upon salivation ; the antecedents, the accompanying symptoms, and the particular circumstances under which these lesions arise, and when, above all, we add the effect of mercury itself, we shall be always able to arrive at least at a rational diagnosis, if not an absolute one ; in either case sufficient to guide us in the employment of mercurial preparations. The rigorous diagnosis in cases of aphthæ or simple ulcerative stomatitis is not necessary, as any effects analogous to those produced by mercury counter-indicate, as long as they last, the employment of that mineral.

The *Treatment of Salivation* ought, in the first place, to be prophylactic. Our primary object should be to remove the cause which has given rise to it, if that be in our power. Diminish the doses of mercury, or give them at longer intervals, or suspend the employment of the mineral altogether. As preventive means, we should mention keeping the mouth clean, the use of astringent gargles, and the employment of aperient medicines. Such means, if they do not altogether prevent, will at least diminish, the effects of the disease. When, however, salivation has commenced, and at whatever period of the disease we may be consulted, we should employ that remedy which is the most powerful, and which never fails us: this is, touching the affected parts with pure muriatic acid. Let the affected parts be touched daily with the acid, by means of a little piece of lint wrapped around a probe, care being taken that the acid does not come in contact with the teeth. When no ulceration is present, little pain will be felt, but when such exists, the pain will be severe but momentary, and the ulcerated surfaces will bleed on each application; the mouth should always be washed out after the use of this remedy, and the benefit which follows will become in a short time apparent; the patients, instead of dreading, will claim a repetition of the treatment. When no ulcerations exist, an astringent gargle may be prescribed; in other cases, one that is only slightly acid. Lemonade is the most agreeable drink. Circumstances may arise in which aperients, leeches to the base of the jaw, and bleeding from the arm, may be requisite, and the food should be in proportion to the patient's strength.

It does not, however, suffice that the surgeon should be impressed with the belief that *mercury* may be advantageously used in *secondary symptoms*, that it should be persisted in as long as it tends to cure them, by improving the constitution, by exciting the appetite, by removing the leaden appearance of the countenance, by causing the gradual disappearance of the symptoms. We say, all this does not suffice to fulfil all the indications, and prevent ill consequences; the practitioner should be prepared to employ judiciously the divers preparations of the mineral, according to the urgency of the case, or the particular form present; the best means, then, of doing this, it will be our object to point out in the following pages.

Mercury in its various forms may be made use of in two ways: first, either by causing it to be absorbed by the skin, according to the endermic method, or by its internal administration. There is a third plan, however, which we might allude to, that of absorption by

the lungs. Although the Chinese still employ the latter at the present day, this treatment is not had recourse to in Europe.

Mercury may be administered *externally in a variety of forms and doses*. We shall only allude to such as are in general use.

Mercurial ointment employed in frictions is a very valuable preparation, and has justly met with the approbation of surgeons. It is particularly useful when we wish to bring the patient under the influence of mercury very rapidly; it is likewise strongly recommended in induration of secondary sores. It is advantageous when the intestinal canal is unable to bear mercurial preparations, as not unfrequently happens.

The following simple rules may be borne in mind during its administration. The quantity used should not exceed a drachm, which may be rubbed in on the inner part of the calf of the leg or thigh before the fire every other night; on the alternate days a bath should be taken: by this means there will be little disposition to irritation of the skin, as the ointment does not become rancid, and absorption will be promoted. The frictions should be made alternately on the lower extremities. They should be in the direction of the hair, as the disease called eczema pilaris is thus avoided. Instead of the bare hand, a pig's bladder may be soaked in warm water and turned inside out, and the hand thus enveloped in a sort of glove produces less irritation, and the patient's fingers are not soiled.

M. Cullerier has proposed the plan of placing a drachm of the mercurial ointment in the arm-pit on going to bed, and desiring the patient to sleep without his shirt; absorption will be thus produced rapidly; this is more especially useful when any eruption or ulcers exist on the legs, as the system becomes affected without any local irritation. Although mercurial ointment is a valuable preparation, still the dirtiness of it precludes its general employment, as concealment may be often necessary; but when these objections do not exist, the surgeon may very beneficially employ this mode of treatment.

. *Mercurial Plasters*.—We have often had occasion to observe the good effects resulting from mercurial plasters, particularly one employed by M. Ricord, called *emplâtre de vigo sparadrappé*; in some instances its effects have been general, curing the disease, and producing an effect on the gums, after the other preparations have failed; usually, however, the beneficial results to be expected are purely local. When applied in strips, on chronic ulcers, on those papular eruptions which assume a chronic form, such as the *corona veneris* and many others, it removes them, as by charm, a short time

after its employment. We have not any remarks to make on the employment of ointments composed of *calomel* or *corrosive sublimate*, as in secondary affections they are seldom to be used, and we have spoken already of the use of the latter in baths, and of the rules which should regulate its administration.

Fumigations.—This plan of administering mercury is not of modern date, and is a very powerful means ; the following directions are laid down by M. Ricord. Fumigations should be made every other day, employing cinnabar at first in one-half-drachm doses, gradually augmented to two or three daily. The patient should have fasted five hours before employing the fumigation, and immediately after he should retire to bed, as by these means absorption is favored ; but no plan can be more prejudicial when the skin is irritable.

Various preparations of mercury may be employed *internally* ; among others, we may mention the *blue pill*, one of the most efficacious preparations in the *Pharmacopœia* ; it has the advantage of creating but little disturbance of the digestive organs. It may be given in doses of five, or ten, or fifteen grs. daily ; however, on the first symptoms of diarrhoea coming on, it should be suspended.

Calomel and opium, in the proportion of two grains of the former to a quarter or half a grain of the latter, is a preparation often prescribed with advantage, when we wish to act speedily on the system ; however, the tendency it has to produce salivation is an objection against its employment, and we have rarely seen it given.

Corrosive sublimate, as an internal remedy, should, we think, be excluded from general use. It has a great tendency to produce colic and gastric intestinal irritation ; and, although we have seen it employed on a large scale in France, we have observed few patients who have been able to submit to it long enough to produce a complete cure ; for this reason we prefer the

Proto-ioduret of Mercury.—This preparation is one now very generally employed, particularly in the various forms of secondary symptoms ; it rarely produces any gastro-intestinal irritation, and still less frequently salivation ; and when the first symptoms of the latter appear, a suspension of the remedy causes them to disappear immediately. It should be employed in doses of one grain at the commencement, in the form of pills ; the dose may be augmented according to the rules we have elsewhere given ; that is to say, if the symptoms gradually disappear under the employment of a certain dose, continue it ; if they remain stationary, increase it every five or six days, as experience shows this plan to be better than to gradually

augment it. The dose thus daily taken may amount to six grains, and the quantity required may be often as much as two hundred grains. The exact quantity to be taken can never be accurately stated; it must of course depend upon a variety of circumstances. When the secondary symptoms have yielded, it should not be laid aside at once. The dose should be gradually diminished, and then left off, when we have reason to believe the syphilitic diathesis has been removed, for it is from inattention to these circumstances that patients are subject to relapses. When any one of these preparations has disagreed and been laid aside, provided the symptoms be not cured, some other form of mercury must be used, and it often happens that in a short time after the system will bear a preparation which previously disagreed with it; but this must be left in great measure to the discretion of the surgeon.

Before quitting the subject of the treatment of *secondary symptoms*, we may pass in review the *treatment of the various forms*; merely indicating, however, those which require any modifications from their form, situation, &c.

In affections of the skin, which are accompanied by much local irritation, or which assume an acute form, gelatine baths are very useful; in cases of chronic skin diseases, those which contain sulphuret of potash, or corrosive sublimate, should be employed.

In cases of *papular eruption*, local frictions, with calomel, blue ointment, or applications of the plaster composed of mercury and vigo, may be employed with the greatest success, particularly when we wish to cure rapidly those on the forehead. We can not here pass over in silence the use of the tar ointment, composed of tar and lard; in lepra and psoriasis this is attended with the happiest results. The patient should rub the parts affected daily with the ointment, and his sheets and shirt should not be changed—he lives thus in a tar atmosphere, and the surface is constantly kept covered with grease; it is, in truth, a most unpleasant position, but we have seen eruptions of simple as well as syphilitic psoriasis yield in a few weeks, which had resisted all other means. It is stated by M. Biett that such treatment will not prevent a relapse; this we believe, but we should nevertheless employ it.

The *mucous tubercles* likewise require a peculiar treatment; although cleanliness and the general administration of mercury alone suffice, still the following local treatment may be employed. Let the tubercles be washed twice a day with the solution of the chloride of soda, of such strength as to produce a pricking in the parts; when

dry, let calomel be sprinkled upon them, and dry lint kept between the excoriated surfaces. In a few days the benefit will become visible, and a cure will take place. The disease of the patient represented in plate V., fig. 1. was thus cured in fifteen days.

SECTION III.

SYPHILITIC AFFECTIONS OF THE MUCOUS MEMBRANE.

EVERY portion of mucous membrane which the eye during life can observe is, like the skin, subject to become the seat of secondary symptoms; thus the lips, inside of the cheeks, tongue, fauces, and throat, furnish the most unequivocal and characteristic features of a constitutional affection; not only the margin of the anus, but the inside of the intestine itself, may be the seat of the disease; the lining of the prepuce may likewise give undoubted evidence of the same fact, as seen in plate IV. The use of the speculum daily makes us acquainted with the fact, that the vulva, vagina, and neck of the uterus, are the seat of lesions which may with justice be attributed to constitutional syphilis. To the description of these we shall now direct the reader's attention, and we hope to be able to furnish a more complete history of the secondary affections of these parts than has hitherto been given, for it is a subject on which we have bestowed particular attention.

As it is *in the mouth and throat*, however, that we have been enabled to watch the course and progress of secondary symptoms most frequently, we shall more particularly allude to them in those situations, but our observations will apply to every syphilitic affection of these parts.

SYPHILITIC AFFECTIONS OF THE MOUTH AND THROAT.

THE interest which must attach itself to the subject of syphilis, particularly when the mouth or throat is the seat of the affection, and the few pages that have been devoted to its description and treatment in works on venereal diseases, will, I trust, be a sufficient excuse for bringing forward here this regional sketch.

Some pathologists, and Cruveilhier among the number, have expressed surprise at the tendency of syphilitic disease to break out in the throat; but when the anatomical relations of the throat are considered, when the great number of blood-vessels there met with is borne in mind, when it is remembered that the mouth is supplied with nerves from numerous and different sources, and when we recollect the sympathies existing between the throat and mouth and the various part of the economy—when we call to mind, likewise, the influence that puberty exercises on the genital organs and those parts contained in the throat, we can not be much surprised that in a disease like syphilis it should so often become affected as it is. The throat, from its functions, is frequently exposed to changes of temperature, and first feels the effects of all excesses; these circumstances, however, will be further alluded to in speaking of the various forms of the affection, which I shall at once proceed to describe.

Clinical observation proves that syphilitic affections of the mouth and throat present various appearances, have separate terminations, give rise to different prognoses, and require each a peculiar line of treatment. I shall then follow what I believe to be a natural division of the subject, which I hope will possess the further advantage of rendering clear and concise a very difficult part of pathology.

These affections may be divided into three classes—

1. Primary affections ; 2. Secondary affections ; 3. Tertiary affections of the mouth and throat.

The following cases will, I think, prove that primary affections of the mouth and throat do exist; and as I am not aware of the details of any others in any work, I transcribe them in full from my case-book.

PRIMARY AFFECTIONS.

CASE I.—On the 26th of February, 1839, a man forty years of age, of dark complexion, and small in stature, presented himself at M. Ricord's out-patient room at the *Hôpital du Midi*, and requested that professor's opinion on the treatment of a chancre existing at the root of the penis; accidentally, as it were, he called M. Ricord's attention to something unusual which he felt on the frænum of the tongue. On examination, a sore of a size of a small split pea was observed in this situation, perfectly circular in shape; the mucous membrane seemed as if it had been punched out; at the bottom of

the ulcer a yellowish matter was seen; the edges were somewhat raised, and surrounded with a scarlet-colored areola. The mucous membrane in every other part of the mouth was perfectly healthy.

On account of the suspicious appearance of this sore, M. Ricord admitted the patient, and desired his house-surgeon to interrogate him as to the cause of the affection. The patient gave the following account of himself. A fortnight previously he went to a masked ball with a prostitute, drank freely during the evening, and acknowledged not only having had connexion with this female in the usual way, but admitted that in a moment of *laisser aller* he exposed his tongue to the chances of contagion.

The appearance of the sore, and the confession of the patient, led M. Ricord to consider this as a primary syphilitic affection; but still aware of the difficulties which such cases present, and wishing to come to a positive and not a rational diagnosis, he determined upon testing it by means of inoculation, and consequently inoculated the left thigh with the secretion of the sore on the frænum linguae; on the following morning the characteristic pustule* began to appear, went through the regular phases of the artificial chancre, and consequently left no doubt in the mind of M. Ricord that the sore on the tongue was a chancre contracted in the disgusting manner above alluded to. The chancres on the penis and frænum, as well as that which resulted from the inoculation of the virus, were allowed to remained without any local or general treatment, to enable the pupils to watch the natural course of the disease.

I find in my case-book the following note:—

March 9, 1839. The ulcer on the frænum appears cured, the appearances described as existing on his entrance have disappeared, and there remains only a pearly-white cicatrix. The artificial chancre is of the size of a split pea, the bottom covered with a yellowish substance, and the edges of a bright redness.

The caustic was applied to the cicatrix on the frænum (to-day, 9th of March), to the artificial chancre, and that on the root of the penis; aromatic wine and lint ordered to be kept constantly applied on the ulcers.

March 21. This patient went out perfectly cured.

CASE II.—M. Ricord has kindly communicated to me the following particulars of a case on which he was lately consulted:—

A patient presented an indurated sore on the mouth, accompanied with a lenticular eruption on the abdomen, leaving no doubt in M.

* See page 176.

Ricord's mind that this man was suffering under secondary symptoms ; he denied, however, ever having had chancres on the penis, but, on being pressed, admitted that he had exposed his mouth to contagion with a female who had come likewise to consult M. Ricord ; no traces of disease were present on the external organs of generation, but by means of the speculum a sore was distinctly seen on the neck of the uterus. This female presented, likewise, traces of a lenticular eruption on the abdomen.

CASE III.—Some months previous to the occurrence of the last-mentioned case, a poet of some celebrity consulted M. Ricord for a sore throat ; on looking into the throat, a distinct ulcer at the back part, unaccompanied with any other disease of the mouth, was evident ; around this sore there was some redness, but otherwise the mucous membrane appeared quite healthy ; no enlargement of the glands of the neck was present. On questioning this patient, he avowed that in a moment of exaltation he ran the risk of direct contagion. The thigh was inoculated with the secretion of the sore on the pharynx, and an artificial chancre followed on the inoculated point.

A mild nutritious diet was ordered, the ulcer was cauterized, and the patient got rapidly well without the use of mercury.

Since my return to London I have met with two cases of what I believe to be primary syphilitic affections of the mouth. The first example presented itself on the under lip of a dressmaker ; in size it was about as large as a shilling, and had all the characters of sores of that size on the organs of generation. The existence of all syphilitic affections, past or present, was denied, and, as far as my examination went, there were no traces of syphilis. This patient attributed the sore to the habit of putting pins in her mouth. It began, like a pimple, three weeks previous to her admission into the hospital. Inoculation was not attempted, but the gentleman who treated her, believing this to be a syphilitic sore, prescribed blue-pill twice a day, and the patient left quite well.

The second case occurred in a young man who acknowledged that it was probably a chancre ; it became indurated, and after cicatrization the under lip was twice its natural size in the centre. Mercury was given, and the swelling and induration rapidly yielded.

Mr. Lawrence has permitted me to mention that a case of this nature fell under his care some time ago. A young man consulted him for a sore on the lip, which, observed Mr. Lawrence, presented

so much the characters of chancre, that I did not scruple to tell my patient, that if the sore had been on the penis, I should have declared it to be lues. The patient then avowed that my suspicions might be well founded, as he had exposed his mouth to the chances of contagion with a prostitute.

M. B. de Leury, the surgeon to those prostitutes under the care of the police in Paris, told me that from time to time he meets with primary sores on the mouths of these unhappy creatures ; and this is not surprising, when we learn from Parent Duchatelet "Sur la Prostitution," that "Il est peu de vieilles prostituées qu'on ne puisse ranger parmi les tribades."—tome i., p. 165.

The preceding cases show that the *anatomical characters* of primary sores on the mouth and throat are similar to chancres occurring on any other part of the body ; they likewise prove that in good constitutions the disease may limit itself, and get well under very simple means ; but should phagedena or gangrene attack this specific sore, the course of the affection may be altered, and it may take on all the severity that chancre, complicated with gangrene or phagedena, elsewhere assumes ; the soft palate may be moreover destroyed, and necrosis of the surrounding bones take place, with all the consequences which these accidents may entail.

The *cause* of the affection I have traced, in the above and in some other cases, to direct contact of the mouth with a chancre, and inoculation has shown that the sores were identical ; but I believe that mere contact of the secretion of a chancre and a sound surface, be it mucous membrane or skin, is not alone sufficient, in order that the virus produce its specific effects. I believe, judging from what I have observed elsewhere in investigating inoculation, that it must remain a sufficient length of time on the mucous surface to destroy the epithelium ; should it have introduced itself into a mucous follicle, the lining probably is destroyed before the pustule becomes developed ; should, however, the virus have come in contact with an excoriated surface, or one deprived of epithelium, mere contact seems to be sufficient, as a chancre will be immediately developed. The above opinion is confirmed by the impunity with which many persons have swallowed pills containing syphilitic virus mixed with bread crumbs ; and this leads me to mention, that if the virus be mixed with much foreign matter, the probability is that it will produce no effect, unless there is a lesion of continuity. These remarks are not without practical importance, as they tend to explain the reason why primary sores are uncommon in proportion to the number of cases of exposure to

contagion, and from the accessory conditions which are necessary for the occurrence of the disease.

The immediate cause, or syphilitic virus, may (as probably happened in the above-named cases) come *directly* in contact with an excoriated or abraded surface, or at least with one deprived of epithelium ; I believe that this is the usual means of contagion. Previous writers, who have admitted the existence of primary sores on the mouth, think that the virus may be transmitted through the medium of various agents. Thus, Cullerier believes that tobacco-pipes, drinking-glasses, &c., may transmit the disease from one individual to another. Of course it is not my intention to question the truth of the facts advanced ; but in my long study of the disease in hospitals, I have never seen a case which might reasonably be attributed to such a source ; it is true that patients will often attempt to explain the presence of these sores by tobacco-pipes, &c., to conceal the true means by which the disease has been contracted ; but I have, after gaining the confidence of the patient, too often learnt that this was only a fiction to conceal the source of the affection, as well as the depravity of the patient.

I believe that this means of transmission is possible, but that it is very rarely met with, from the following circumstances : 1. Chancres, or rather primary sores on the mouth, are very rare, for reasons stated above ; hence the possibility of transmitting the virus from them by means of glasses and tobacco-pipes must be very rarely met with ; for we are no longer under the impression that chancre on the penis can infect or render contagious the other secretions of the body, or that the breath of an individual can infect another by whispering, or that a kiss may be the means of conveying the virus, unless a chancre exist on the lip.

Should, however, a chancre exist on the mouth, and the secretion soil a pipe or glass, *that* pipe or glass *may* communicate the affection ; but even this must be rare, for the virus will become mixed and diluted with saliva, which, although it does not destroy the effect, will nevertheless diminish the probability of its action ; and if no excoriation of the mouth or abrasion of the mucous membrane exist, probably (from what we see elsewhere) no chancre will follow even the introduction *into* the mouth of the contagious principle.*

These reasons induce me to ask if certain writers have really seen the primary affections of the mouth and throat ? I am well aware of the high authorities whom I criticise ; but although they describe the

* Vide Ricord, *Traité des Mal. Vener.*, *passim*.

affections of the mouth as primary, they still seem in doubt on the point in the observations they make, and allow that the diagnosis is very difficult, in some cases almost impossible.

Mr. Colles states, in his valuable treatise on the venereal disease, that these primary syphilitic sores on the mouth are not of uncommon occurrence in Ireland, and that he knows of no disease which is more contagious—not even the itch.

I have carefully read over the cases which he has given, but I am obliged to acknowledge myself unable to decide upon their nature. I have seen in the Foundling hospital at Paris a disease so similar to what he has described as syphilis, and which the French, in its ulcerative stage, call *muguet*, that I am almost inclined to think he has been mistaken in his diagnosis.

This disease, which Monsieur Guersant has so well described in the French dictionary of Medicine, reigns epidemically, may attack the mouths of persons of all ages, though usually seen in children, and may be communicated to the nipples of nurses; and M. Guersant thinks that the sores which arise on the nipples are the effect of a direct and mechanical action, which determines a local inflammation of the same nature—a result which may be compared to pseudo-membranous irritation arising on a finger which is constantly sucked; although (continues the same author) it is epidemical, still it is not contagious, for notwithstanding the children drink out of the same cups in the hospital, I have not remarked that it is communicated from one to the other. I would ask, therefore, Mr. Colles, if the cases he has described may not have been ulcerative *muguet*, occurring epidemically in families, submitted to the same influences of damp, clothing, and food.*

SYMPTOMS.—These, I think, have been described at sufficient length in the above cases, and as they resemble those of simple ulceration, I have nothing to add; they are usually slight, unless inflammation or gangrene attack the sore. Under these circumstances they may become very severe.

DIAGNOSIS.—When a sore exists on the lip or tongue, I need not state that its character may be easily studied; but when the surgeon (and I of course address myself now to the young surgeon) is consulted for some affection of the throat, as is often the case in hypo-

* The same observations may be made relative to the cases of John Hunter, which he believed were not syphilitic, but which he classed under the title, "Diseases resembling Syphilis," which his learned commentator, Mr. Babington, like Mr. Colles, says he has no doubt were syphilitic.

chondriacal patients, it is not always easy for an inexperienced eye to decide if an ulceration exist, more especially if the patient be suffering, or has had syphilis, and complains of the throat.* I had an opportunity of seeing a case which impressed this on my memory, in the month of February, 1839.

A young man complained of great inconvenience in his throat, and consulted M. Ricord, fearing that he should lose his palate. He stated that, several months previously, chancres had appeared on the penis a few days after connexion with a female who was diseased; notwithstanding the employment of mercury and sarsaparilla, a hard point remained in the situation which the chancre had occupied, and was excised by a country surgeon. The wound healed in a few days, and he has suffered no further inconvenience from the complaint until lately, when he has felt inconvenience in his throat.

On looking into the mouth, the mucous membrane is perfectly healthy, but at the posterior part, and on the amygdalæ, the following appearances are seen: the surface, instead of possessing its natural color, viz., a rosy tint, like that of the lips, presents a mottled character; some parts are white, and others red, and pus is irregularly spread over the whole. Some persons who witnessed this appearance of the throat for the first time, considered that an ulceration was present, and the history of the case seemed to render it probably syphilitic; but on wiping the parts with lint on a probe, and viewing the throat in a good light, vessels were seen traversing these supposed ulcers. Not unfrequently these same appearances have presented

* To gain a good view of the throat, the surgeon will do well to employ Dr. Holt Yates' Speculum Oris. This useful little instrument was introduced to the profession by Dr. Holt Yates of London in the year 1826, since which time he and others have been in the habit of employing it, both in private and public practice, with great advantage, in all cases in which an accurate and extensive view of the fauces was required. To the surgeon it is of essential service in the removal of tumors, or when called upon to perform any similar operation about the tonsils. By its aid, not only may the jaws be distended without inconvenience to the patient, and the adjacent parts protected from injury, but the operator is enabled to see what he is about, take his own time, and to have both his hands at liberty.

The facility of observation and precision which it affords to the medical attendant in important cases is incalculable; and being made of silver, the most fastidious person can not object to its use. The instrument is perfectly simple, and tells its own story.

It consists of a graduated hoop, with a sliding button, so placed that it may be regulated according to the age of the patient and other circumstances. Being gently pressed upon above and below by the teeth, the spatula, which is concave, and slightly inclined downward toward the extremity, depresses and protects the tongue, and thus an extensive and uninterrupted view of the fauces is obtained.

Any gentleman wishing to see the speculum may do so by applying to Mr. Ferguson, surgical-instrument-maker to St. Bartholomew's hospital, London.

themselves to my notice, and it has been only by looking for the vessels that I have been able to decide if an ulcer really existed or not; it was, I believe, Boyer who first pointed out the error the surgeon may fall into, and the means of avoiding it.

The young surgeon should be aware that the glands on and around the tonsil are sometimes very large, and when their secretion is adherent, this natural state of the parts may be mistaken for ulceration; in such a case, the use of a probe covered with lint will remove all doubt as to the nature of the appearance.*

I may likewise state that stimulating gargle, aperient medicine, and a nutritious diet, will in a few days cure these simple cases of irritation, or the mottled state of the throat.

Primary syphilitic affections of the mouth and throat may be mistaken for various simple affections of these parts. I have already alluded to the THRUSH in a state of ulceration, which, although in ordinary cases it may be easily distinguished, still in a great number can only be known by a consideration of the cause, form at the commencement, general symptoms, knowledge of the epidemic, or sporadic cases, &c. Still, however, if the surgeon bear in mind that a chancre is unattended with any affection of the *gums* or mouth, that it is usually isolated, that it occurs in persons otherwise in a perfect state of health, and is unattended with any general symptoms; on the contrary, that the aphthous disease termed THRUSH attacks several parts of the mouth, and particularly the gums and throat, is preceded and accompanied by fever, disorder of the digestive functions, and of the other mucous membranes, and frequently with affections of the skin, which assumes a purple appearance, and may terminate fatally by wasting of the patient's strength in a short space of time; that it occurs in moist, damp, or ill-ventilated situations, either sporadically or epidemically, and consequently must not be confounded with the *contagious* nature of other diseases—I say, considering this, he will pause before attributing the affection to syphilis, the primary form of which is very rarely met with in this situation.

This affection might be sometimes confounded with ulcerated aphthæ of the mouth, the consequence of indigestion, or ulcerations of the gums brought on by decayed teeth, or caused by tartar accu-

* It may seem puerile in me to lay so much stress on points which may appear so easy of decision; but I frequently see cases in which ulcers are overlooked; few patients know how to open their mouths; others place their tongue in such a position that it is next to impossible to see anything. I find that the manner of opening the mouth, and keeping quiet the tongue, should be learned previous to the use of the spatula, which often produces a convulsive action of the lingual muscles.

mulated around them ; but it is only necessary to allude to these causes, to prevent any one mistaking the effects for those of syphilis.

Primary affections should be distinguished from the secondary ones ; but I shall defer the consideration of this subject for the present, until I have treated of the latter.

PROGNOSIS.—It is of no little importance to form a correct opinion of the nature of an ulcer on the mouth or throat, as the prognosis will materially be altered by it. A chancre on the mouth of a healthy individual will, by proper treatment, speedily get well, and in this respect differs greatly from all other affections. Should it occur in a person of bad or broken-down constitution, either from bad living or dissipated habits ; should it become complicated with gangrene or phagedena, the situation of the parts must lead the surgeon to dread the loss of the palate, exposure and necrosis of the bones, and their consequences.

On the probability of the occurrence of secondary symptoms, the same rule holds good, here, as in other parts of the economy ; they are to be expected, not in proportion to the number, size, or length of time of the existence of the chancres, but in proportion to the number of cases attended with induration. What the relation is between induration and secondary symptoms I can not stop here to inquire ; but it is a fact well supported by statistics and daily observation, that secondary symptoms will follow simple chancre in a feeble proportion, whereas scarcely one person will escape constitutional syphilis, who suffers from indurated chancre : it was for these reasons, probably, that our great master, Hunter, refused to designate as syphilis any sore which was not indurated.

TREATMENT.—The first indication to be followed is the removal of any cause which can increase or keep up the affection. In the first instance we need not pay any attention to the specific disease ; if inflammation be present, the usual antiphlogistic remedies must be had recourse to ; if there be decayed teeth in the gums, they must be extracted ; if any disease of the digestive tube exist, it should be combated with the usual remedies : having, then, reduced the affection to its simplest state, the surgeon may turn his attention to the specific disease, which in the previous pages I have induced him to believe is local, is a surface secreting a specific virus, and consequently to be destroyed as soon as possible. The best agent for doing this is a finely-pointed stick of nitrate of silver, with which the ulcer should be lightly cauterized, and the operation may be repeated as often as the little eschar falls off, until cicatrization be complete.

In the majority of cases no other treatment is requisite ; should induration exist, this treatment must be varied ; cauterization is then of little avail ; cicatrization will not occur, or if it does, the sore is liable to break out on the slightest irritation. Mercury, which in the former case I objected to, is now of the greatest benefit. Under its use all induration ceases, the sore cicatrizes kindly, and secondary symptoms *will most probably* not follow. However, the best plan of employing mercury ; the reasons for employing it in frictions or internally ; the preparations which are preferable ; the dose ; the quantity necessary for the cure of the affection ; the abuses in its administration ; and the ill consequences to which it gives rise—are points which I have treated of very fully, when speaking on that subject, at page 260, to which I must refer my readers for further information.

SECONDARY SYPHILITIC AFFECTIONS OF THE MOUTH AND THROAT.

If the primary form of syphilitic affections of the mouth and throat be rarely met with, and have been, by those authors who consider it a common affection, confounded with other diseases, it is no less certain that the secondary form which I am about to describe is of every-day occurrence, and has been very well depicted by authors who have written upon syphilitic affections of the throat. The diagnosis and treatment have not, however, been noticed in the manner that the subject deserves ; and trusting that I may be able to throw some light upon this affection, I shall treat of it as if nothing had been written upon the subject ; taking my descriptions from nature, and illustrating my views by cases which have fallen under my own notice.

I extract the following case from my note-book :—

February 1st, 1839.—The patient who occupies the bed marked twenty-eight in the second ward at the *Hôpital du Midi*, presents the following symptoms :—

No eruption on the abdomen or extremities ; on the scalp two or three impetiginous sores are observed. On the penis an indurated sore completely surrounds the base of the glans. The throat is red, particularly at the back part, on the pharynx and uvula. We observe on the tonsil of each side a whitish semicircular character of the size of a silver penny, giving the tonsil the appearance of an excoriated surface. Lint wrapt round a probe, and rubbed over the

surface, does not remove this tenacious pearly-white substance. The amygdalæ are somewhat swollen ; the speech is little altered, deglutition good, and no pain in the throat, but the patient complains of a constant source of irritation there. (See plate VI., fig. 1.)

The patient gives the following account of himself. Has enjoyed excellent health. A year ago he contracted a gonorrhœa, followed by chancre and bubo. Was treated for these complaints in the Venereal hospital during the month of August, and left cured in the commencement of September. Since that period has repeatedly contracted fresh chancres, and has treated them with the aromatic wine. The indurated sore on the penis he states to have existed about two months ; has employed no treatment, except the local application of the aromatic wine, which he finds diminishes and has benefited vastly the sores.

Has been liable to the uneasiness in his throat for some time ; can not exactly say how long, and attributes it to exposure to cold. He is a waggoner.

M. Ricord ordered this patient a simple gargle, and to continue the aromatic wine as a local application to the chancre ; wishing to show his pupils the effect of a warm atmosphere and good diet.

February 15. The condition of the patient has not altered.

March 11. This patient now takes four pills, containing each one grain of the proto-ioduret of mercury daily ; he commenced with one on the 15th of February.

March 18. Went out perfectly well to-day.

The preceding observation may give the reader a good idea of what I believe to be a secondary sore-throat ; an affection which may be met with very frequently in private and public practice, and into the history of which I shall at once enter.

The ANATOMICAL CHARACTERS of secondary syphilitic affections of the mucous membrane are, generally speaking, very characteristic. A redness appears on the surface ; the centre of the red circle becomes pale, extending in size until it attains that of a sixpence. Very often several points take on this character, and coalesce ; thus neither the circular nor semicircular appearance persists, but the affected points present an irregular patch of whitened epithelium, which resemble the skin on a washerwoman's hands, or the appearance of the finger which has been covered with a poultice. If any attempt be made to remove this whitened patch, it will be found very adherent to the tissues beneath ; and I have never been able to satisfy myself as to its nature, viz., if it be simply the epithelium altered,

or if it be a secretion superadded to it. I am induced to lean to the latter opinion, as the centre of this bleached surface may be raised above the level of the surrounding healthy mucous membrane. In many persons only one of these patches of a circular shape, as thus, ⊖ is met with. One circle may intersect another, so that a patch of mucous membrane may contain several imperfect circles, as ⊕. It is only the mucous membrane here represented between the lines that is affected, giving the throat the appearance of containing so many semicircular bands of swollen mucous tissue, and this appearance we have in vain sought for in other diseases. These patches are spread in great quantities over the mouth, gums, tongue, pharynx, or uvula. Usually there is no redness of the mucous tissue around, but complications may supervene. Thus I have frequently witnessed an erythematous blush surrounding each patch ; ulcerations may take place on the whitened surface, in the form of points, which unite, and the entire bleached appearance is destroyed, or only remains at the circumference, in the shape of a grayish fringe. I have often witnessed these white patches remain in a stationary state during entire months, particularly when the patient is not exposed to cold or damp, and even under simple care they may disappear, but such a circumstance is very rare. They usually become, sooner or later, the seat of ulceration, which destroys the surrounding part, and the sore, which at first extends only in circumference, at a later period, particularly in bad constitutions, gains in depth, and assumes a dirty unhealthy character ; inflammation or gangrene may seize upon it, or if neglected, it may become what I shall hereafter describe as the tertiary form of sore-throat, causing destruction of the deep-seated tissues, and a loss of the palate, nose, &c.

These are the anatomical characters of the affection ; such is the course of the disease ; and it will be at once seen that, commencing at the surface, it gradually gains the deeper tissues ; but it is a peculiarly chronic affection, unless some complications interfere with it.

SITUATION OF THE PATCHES OF ULCERATION.—This subject is not without its interest in several points of view ; most frequently the patches are observed on the amygdalæ, or on the sides of the tongue, or close to the frænum on its under surface ; they are met with, though less frequently, at the corners of the mouth, and they here soon assume the appearance of scabs, which are very characteristic, and liable to bleed when the mouth is examined. Sometimes they are met with on the dorsum of the tongue, here assuming an elevated charac-

ter, like the condyloma around the anus. There is at present (October, 1840) a case of this description under the treatment of Mr. Lawrence, at St. Bartholomew's hospital. More rarely this form of disease is seen on the back part of the pharynx; on the uvula it is so rare that I can recollect but a very few cases, although it may occasionally occur, as I witnessed a case lately in Lazarus' ward. The importance of these observations will appear hereafter, in treating of the other form of syphilitic sore-throat.

CAUSES.—In tracing back the history of patients affected with this disease, it will be found that, in the adult, chancre has preceded or co-exists; in the infant, on the contrary, a chancre will be rarely discovered as the antecedent, but the mother will be found to bear traces of primary sores, or it will be ascertained that she is suffering under secondary symptoms, which she has transmitted to the infant during utero-gestation.

Although we thus trace the disease to chancre, or to constitutional infection, it is no less true that all chancres do not necessarily give rise to this affection. Fortunately for humanity, the greater number of primary sores are not followed by these appearances, but observation proves that, in a great majority of indurated primary sores, these appearances will be observed; and on interrogating the patient it will be discovered that an indurated chancre has preceded them.

Usually, however, the indurated chancre seems only to give a predisposition to the affection, or rather to give rise to a state of the constitution which has been called a syphilitic diathesis. In fact, the appearance of this identical symptom seems to depend upon chancre as the cause; but to give rise to its development, various exciting agents are necessary: these seem to consist in exposure to cold, damp, or moisture; fatigue; improper or insufficient food; excesses of all kinds, &c. Every surgeon must be fully aware that a patient who has been the subject of an indurated sore, although he has taken no mercury, or employed any so-called specific remedies, may with proper care escape sore-throat for some months; but no sooner does he expose himself to any of the exciting causes above spoken of, than he observes these appearances in the mouth and throat. Such are the reasons which induce me to admit a syphilitic diathesis, which gives rise, under certain circumstances, to secondary symptoms, on the exposure to exciting causes, in the same way that, in a scrofulous constitution, health may be preserved during a long period, provided various precautions be taken; but should cold, unwholesome food, or an accidental fall or blow occur, a train of local

and general symptoms follow, which betoken phthisis or a white swelling.

The consideration of the influence of exciting causes is very important, as explaining some exceptional cases of this affection that appear a long period after the chancre. We can usually detect a distinct and natural relation between the primary and secondary symptoms : thus, during the existence of an indurated chancre, this affection often appears ; in other cases it is some few weeks after its cure : when the chancre has been imperfectly treated with mercury, the time which elapses may be longer. However, the affection of the throat may be usually said to appear six weeks or two months after the appearance of an indurated chancre.

Age, professions, and sex, will only act as predisposing causes, inasmuch as they cause excitement of the mucous membrane ; thus the child, from the fact of sucking, is greatly predisposed ; persons who use tobacco-pipes are very liable to it : for here, as in those who play upon wind-instruments, there is a great call upon the secreting apparatus of the mouth ; and in the treatment of such diseases these points should not be lost sight of.

THE SYMPTOMS of the affections are, in the commencement very trifling, only a slight irritation or swelling ; should, however, inflammation follow, the usual symptoms of inflamed sore-throat will occur, and the general symptoms may run high.

CONCOMITANT DISEASES.—The affection I am describing rarely occurs alone. I have already mentioned that an indurated primary sore often exists on the penis, while, at the same time, an affection of the scrotum, anus, or genital organs in the female, which is called in France mucous tubercle, and in England condyloma, often precedes or co-exists with it. A lenticular eruption is often visible on the abdomen ; on the scalp an impetiginous affection occurs, as in the case mentioned above ; the hair falls off, having previously become dry ; the glands in the neck are often enlarged ; in fact, all the symptoms described as secondary may be present. The importance of these affections I shall now show in speaking of the diagnosis of the disease.

DIAGNOSIS.—When one or more of the white patches, circular in form, or assuming the semicircular character, are seen on an hypertrophied portion of the mucous membrane, unaccompanied with salivation ; when the patient admits having lately had, or still bears traces of, an indurated chancre ; when various well-marked secondary symptoms are evident on the patient ; when these have been but

little benefited by care and local applications—few persons will be found who deny that the symptoms are produced by syphilis, and perhaps, with me, they will call the disease a mucous tubercle of the mouth, the consequence of general and constitutional infection.

Were it in all cases as easy a matter to diagnosticate the affection, the study of the subject and the treatment of the patient would be very easy; but those who have seen much of these diseases are fully aware that cases present many difficulties, and it is to the study of these that I propose now calling the reader's attention.

It is frequently found in practice, that in consequence of some disorder of the stomach, or from the use of mercury, aphthæ or salivation has occurred; the mouth may thus present an appearance which masks the disease, and the anatomical characters above described furnish no guide, as it is impossible, from the appearance of the mouth alone, to give an opinion; it is well in such a case to wait a few days, to treat the salivation by a gargle composed of muriatic acid and infusion of roses, and touch the gums with a camel-hair brush dipped in the concentrated hydrochloric acid. This local treatment, combined with a gentle aperient every other morning, and a light and nutritious diet, will cure aphthæ and salivation; but the characteristic mucous tubercle will now become evident, for this local treatment will not remove it, and thus the diagnosis will become clear.

With relation to the history of the case, considerable difficulties often prevent us from forming a diagnosis; patients, intentionally or through ignorance, or inattention to the previous complaints, state that they have never had chancres, much less indurated primary sores. The absence of chancres should not prevent us from judging from the other symptoms. Let it ever be borne in mind that chancres may heal in a few days, that they may be contracted in unnatural intercourse, and consequently may exist on other parts of the body as well as on the penis, that they *may* be contracted from wounds on different parts of the body, by scratches, &c.;* thus the denial of the patient is not a sufficient reason to make us conclude that chancres have never existed.†

* See page 197.

† A short time ago a patient was admitted under the care of Mr. Lawrence in Faith Ward, with one of the best-marked cases of syphilitic affection of the tongue I ever saw. Believing, I presume, that she could deceive the practised eye of that eminent surgeon, this female wished to appear indignant at certain questions being asked as to her previous complaints, and stoutly denied the possibility or pre-existence of chancres; finding this, Mr. Lawrence passed on quietly, telling her that she *should improve*, for her

Other forms of secondary symptoms are not always present, and in such cases we are deprived of one of the most valuable guides the surgeon can possess. On the other hand, the practitioner should be well convinced that to come to a correct diagnosis on the nature of syphilitic affections of the mouth, the symptoms by which he judges should themselves be correctly diagnosed as syphilitic ; thus, should aphthæ on the mouth be mistaken for the mucous tubercle, should a sore on the penis, without sufficient reason, be considered syphilitic, or should the chancre have existed years previous to the appearance of the affection—lastly, if the supposed secondary symptoms are not well marked, viz., if no lenticular eruption or mucous tubercles about the anus or scrotum be present, a very cautious opinion should be given, for there are two very great faults which surgeons fall into ; the one sees syphilis everywhere, the other seems to shut his eyes to symptoms which can be rationally and truly connected with the disease ; but I trust I have said enough to show the necessity of weighing each symptom, and giving it only its proper value ; each individual sign must be compared with and corrected by the other, and practice will assist us in forming a correct decision.

PROGNOSIS.—It may be inferred from the description above given of the course of the disease, that the prognosis is favorable ; provided no excesses are committed, or the patients do not expose themselves to cold or damp, the disease will not assume a worse aspect for many months, but will, on the contrary, by care and the simplest treatment, gradually subside. I have frequently witnessed such cases ; the relief, however, is but delusive, and the disease returns again and again, each time committing greater ravages, and in this way years will pass over. If, however, the case be seen at the commencement, there is no form of secondary symptoms which can be more speedily cured ; but the patient should be given to understand that in the more advanced stages, when the relapses have been frequent from want of any treatment, or from an injudicious one, the case will be always more difficult to cure, and the chances of further relapses greater ; in fact, there are cases which it becomes very difficult to treat in consequence of constitutional peculiarities, viz., an intolerance of mercury, and other circumstances I shall not stop here to speak of. In fine, it may be stated that the disease is more readily cured in proportion to the early period at which we are called tongue was a *sad tell-tale* ; the patient, feeling the truth of this witty and sensible remark, on the subsequent visit acknowledged the existence of a *very little sore* some months previously, and she left the hospital well in a few weeks.

upon to treat it, and to the mildness of the other secondary symptoms which accompany it ; at later periods, I have witnessed one or two of these patches on the mouth which persist, but these are observed when the patients have neglected themselves at the commencement. Their existence, however, annoys the patient, and vexes the surgeon. Lastly, the general health of the patient must not be lost sight of in forming a prognosis.

TREATMENT.—The first indications which result from a consideration of the causes, symptoms, and complications, are to withdraw your patient from everything which can be considered an exciting cause ; to put him upon a mild but nutritious diet, to combat any inflammatory symptoms by ordering antiphlogistic means. Having thus paved the way, the surgeon may feel called upon to employ mercury. Notwithstanding all that has been written against this mineral, it is the only remedy that can be depended upon in all cases ; and so much am I assured of this, that I have seen the very men who declaim most bitterly against it, obliged to have recourse to it after all other remedies have failed. I admit most readily, however, that this affection will often get apparently well without mercury ; but as the patient is liable to relapses on slight causes, it is far better to commence immediately a mercurial treatment, which, as I stated elsewhere, is attended with no bad results, when properly administered. For this purpose, blue pill may be given once or twice a day, or the proto-ioduret of mercury in one-grain doses ; however, from causes which I am at present unable to explain, this latter preparation produces a great degree of colic, and although I found it so useful in France, I have been obliged to leave it off latterly and administer blue pill. The mouth or throat may be gargled with the following :—

Acidi Hydrochlorici diluti $\frac{3}{i}$.

Decoct. Cinchonæ corticis $\frac{3}{iv}$.

M.

The length of time that the mercury must be continued, and the manner of giving it in increased doses, are so fully treated of at pages 260–268, that I shall not here again allude to them.

Were the syphilitic affections of the mouth and throat confined to the two forms we have described in the preceding pages, much human suffering would be saved, and the duties of the medical practitioner considerably simplified ; but such is not the case ; the severest form still remains to be described, and will form the substance of the next section, under the title—

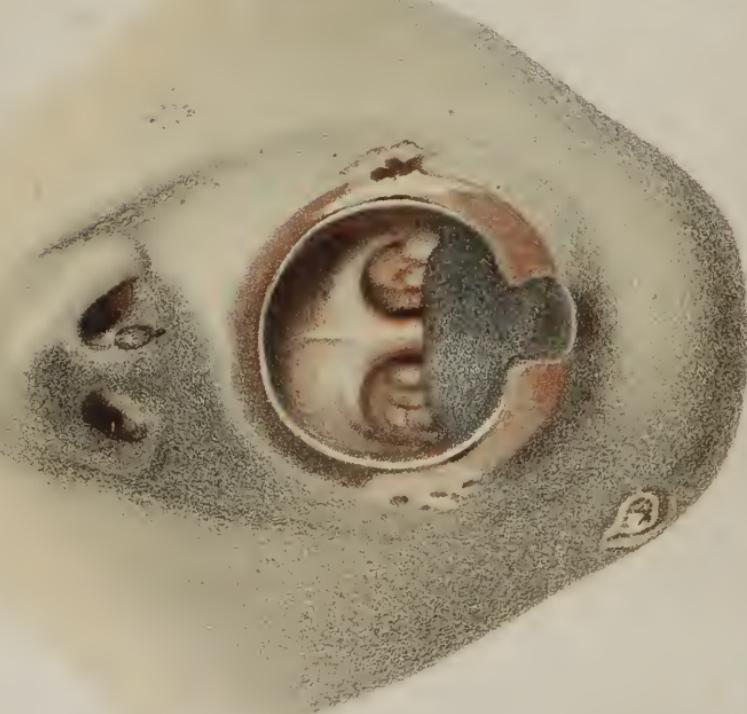
TERTIARY SYPHILITIC AFFECTIONS OF THE MOUTH AND THROAT

THIS third variety in the form of syphilitic affections may commence in any of the following ways:—

1. Most frequently (in shattered constitutions, or in persons reduced by the combined effects of dissipation and bad treatment) some pain is felt in the throat or tongue; there is a thickness of the speech, which at first excites but little attention; on examining the affected parts, the medical man will not fail to observe more or less redness and swelling confined to a particular portion of the mucous membrane, and the parts present all the characters of the formation of an abscess; this point will soon take on an erysipelatous redness, break, and expose a tawny-colored slough. See plate VI., fig. 1. A probe will detect the extent of the ulceration, which, if situated on the back of the pharynx, may expose the bone, having previously destroyed the periosteum; when seated on the roof of the palate, a portion of the palate-bone will be found carious, and a communication to exist between the nose and mouth; the peculiar fetid smell will, moreover, convince the surgeon of the destruction of the bone, of which large portions often come away. The disease, however, does not seem confined to the mouth; in a great number of cases an erysipelatous redness and thickening is perceived at the root of the nose, not, however, larger than a shilling in circumference; these pursue the same course as on the palate, break, and expose the diseased bones. Not unfrequently, pustular eruptions, forming the scabs of rupia, appear on the extremities, and the general emaciation continues; the countenance has now a cadaverous appearance, and the pulse bespeaks the general feebleness of the patient, who, if not relieved by proper treatment, sinks under the combined effects of colliquative sweats, diarrhœa, great suppuration, and want of sleep from severe pain in the bones and joints, and loss of appetite. Such, I believe, is a concise sketch of the most frequent form of tertiary syphilitic sore-throat, with its accompanying symptoms, not to be mistaken when once witnessed.

It may, however, commence in another way; the secondary form of syphilitic affection of the mouth or throat described in the preceding section may become aggravated, and the superficial ulcerations be converted into those excavated tawny sloughs which are described in the last page, and they may produce such a destruction of parts as to lay bare the bones, which, however, do not necessarily exfoliate. These forms are frequently met with on the dorsum of the

Tertiary.



Secondary.



tongue, see plate VI., fig. 1. They form also on the tonsils or the hard palate, and are covered with detritus of the ulcerated parts, and viscid saliva, forming a picture of disease which seems more extensive than it really is. The progress of the affection and concomitant disease are similar to that of the first form just described.

In cases which are far less numerous, the patient perceives little lumps gradually form in the substance of the tongue, which becomes irregular on its surface. To the feel, these little tumors are very hard, varying in size from that of a pea to a hazel-nut ; at first chronic in their progress, these masses become soft, suppurate, and open by fissures ; the edges are often everted and indurated ; livid chasms run in a perpendicular or transverse direction on the tongue, which is covered with a viscid secretion ; the organ is very much fettered in its movements from its increase in size, and deglutition and articulation are interfered with.

Now, although one or other of these forms may be found alone as described, cases are met with in which they occur together ; more frequently, however, one form predominates, thus showing that they are varieties of one and the same stage of syphilis, a fact which I shall not further attempt to prove.

HISTORY.—If patients laboring under these forms are interrogated, the surgeon will not fail to discover that chancres have preceded them ; in the few exceptional cases, the patient may not have observed them, or may be desirous of concealing the fact, but in ninety-nine out of every hundred cases the previous existence of chancres can be ascertained. It is not, however, sufficient merely to ascertain that primary sores have preceded ; the surgeon should not fail to interrogate the patients on the period which has elapsed and the symptoms which have followed. The apparent striking contradictions between their answers will not fail to astonish the young surgeon. Thus one class of patients will tell you that several years ago (say four or five) they contracted chancres ; a period of four years elapsed when the present symptoms broke out ; during that interval not a symptom of disease was apparent, and they enjoyed excellent health. Another class will state that some time ago (two years) a chancre existed ; at the end of three or four months, secondary symptoms of a marked character appeared, which were relieved from time to time, and then broke out again ; thus months passed on, occupied with alternate attacks and cures, until the present affection showed itself. On questioning further these two classes of patients, the former will generally tell you they took mercury ; the latter did not, or only in

small quantities ; and it would appear that we must attribute this immunity from disease for some years to the mineral preparation.

In one and the other class a point of resemblance is almost universally found, viz., that many months or years have elapsed since the occurrence of chancres ; in the exceptional cases (as I met with one lately) there had been a primary sore which had healed some months only, but two years previously there had existed likewise a chancre. The surgeon, bearing this in mind, will, I think, find my position true. Hence there is a difference, not only between *the characters* of the secondary and tertiary affections, but likewise as to *the period of their appearance* after the primary sore.

Under the head of History I may say a few words on the *frequency* of these affections ; they are to be met with very often in practice ; *perhaps*, however, not so frequently as formerly ; but, in relation to the number of persons who contract chancres, the disease in question is fortunately rare. What, then, are the predisposing causes ? will become the next question.

If the appearances on the penis or the statements of patients can be relied on, the chancre which leaves an indurated mass after its cicatrization is the one followed most frequently by secondary symptoms, and subsequently by the tertiary. It has often struck me that the chancres must have been phagedenic, for we perceive considerable cicatrices on the prepuce of patients laboring under tertiary symptoms : and it is, moreover, to be noted that secondary symptoms have not here preceded. Can it, therefore, be stated that phagedenic chancres do not cause secondary symptoms, but predispose to tertiary ? I am uncertain, but I incline to the idea that the same condition of the system which predisposes to phagedenic primary sores does so equally to tertiary symptoms, and not to the secondary. Years of experience can alone clear up this point. Constitutional disposition, excesses of all kinds, poverty, insufficient clothing, scrofula, intestinal affections, any depressing passions, seem to act as predisposing causes ; but again I repeat, happily these affections are relatively rare ; although they are to be met with from time to time.

DIAGNOSIS.—I shall first consider the diagnosis of this the tertiary form of syphilitic affections from the two preceding ones, and shall then indicate the points of difference of the tertiary form from those diseases with which it may be and is confounded.

Few of my readers will be at a loss to distinguish between a primary sore on the mouth or throat, and the affection I am now de-

scribing ; inoculation and the history of the two affections will at once enable them to distinguish it. If, however, phagedena or inflammation attack the throat, the distinction will for the moment be difficult.

The appearances, the period after the primary affections, the concomitant affections, are such striking points of difference between the secondary and tertiary affections, that I think there are few of those who have read the preceding pages but will admit the distinction I have here attempted to depict. However, as these are novel points in surgery, I shall here recapitulate them.

When the mouth or throat presents that superficial bleached appearance, that excoriated condition of the mucous membrane, which ultimately becomes extensively but not deeply ulcerated ; when this character has been preceded by a chancre for some two or three months, and is attended with the scaly or tubercular papular eruption, together with condyloma on the scrotum or vulva, and little impairment of the general health, the surgeon will not, I should think, have much difficulty in distinguishing this as a syphilitic affection, and will justly style it the *secondary form* of sore-throat. See plate VI., fig. 2.

If, on the other hand, the disease, commencing in the submucous cellular tissue, periosteum, or bony structure, ultimately destroys the mucous membrane of the mouth or throat, giving rise to a deep excavated tawny ulceration, or if tubercles form in the substance of the tongue, which cause rents and ugly transverse fissures in that organ ; if, moreover, some two years have elapsed since the occurrence of the primary sores ; and if, together with the above symptoms, rupia and ill-conditioned sores occur on the extremities, together with an impaired condition of the general health, the practitioner will be in no doubt as to the nature of such an affection, and I think he will with me call it syphilitic, but distinguish it from what I have above called secondary, and recommend that treatment which I shall presently advise. See plate VI., fig. 1.

The diagnosis from other affections, not syphilitic, is not always so easy ; it is a very generally-received opinion, that all ulcerations about the throat are syphilitic ; and I have been often astonished at hearing this opinion from men holding high positions both in France and in England. In the present instance it will, I think, be necessary to make a few observations on the subject. In what respect, I would ask, do the tissues which form the walls of the mouth or pharynx differ from those of other parts of the economy ? I am acquainted with none : hence, if (as is generally admitted) every other part of

the body be liable to various forms of ulceration, which are unconnected with syphilis, so may be the throat. I am personally unacquainted with any cause which can give an immunity to the throat from the lesions which are common to other parts of the body, and I therefore think this opinion unsupported (though pretty generally received), that all ulcerations of the throat must necessarily be syphilitic. I have heard, however, an objection whispered, if such ulcerations exist, surely we must have seen them !

I might reply, as has been done on similar occasions, you are not omniscient ; there are many things which you may not have seen, and yet which exist. I, however, waive such a reply, and would say, if you have not seen such cases, it is not from want of opportunities, but from paying insufficient attention to the history of patients, and to having preconceived notions on the subject. I have often heard a patient examined who denied altogether the existence of syphilis, nor could the surgeon either meet with traces of a cicatrized sore, or any concomitant disease *whatever* ; yet he regarded syphilis as the cause, the reader will judge with what justice ; and then this same surgeon will assert that no other disease ever does or can occasion ulcerated throat.

Let the reader or the skeptic peruse the following cases, and say if he has not met with many similar ones which prove the truth of what I have advanced, namely, that other diseases may produce severe forms of ulcerated throat.

CASE I.—A. B. No. 11. Salle 7. *Hôpital des Veneriennes.*
February 8th, 1839.

Complains of sore-throat ; on examination, some redness of the amygdalæ is apparent, but unaccompanied with ulceration ; on firmly depressing the tongue on the right side, at the back of the pharynx, a dirty secretion is seen, which, on being removed with a probe, displayed an irregular sloughing surface, extending as far down the throat as was visible.

The patient gives the following history of himself : A wagoner by trade, he has enjoyed good health to the moment the present complaint began. His family not subject to scrofula. In the month of February last (twelve months ago), while driving his team to Paris, he was seized with a severe sore-throat, which he paid little attention to ; but about Easter it became so much worse, that he was confined to his bed for fifteen days. Gargles and leeches were applied.

Since that period his throat has never been completely well, but he has pursued his avocations as usual. The patient states that his master was seized with a sore-throat about the same period as himself.

A short time since, this patient was recommended to come to Paris, and entered the wards of La Pitié under M. Piorry; but that gentleman, finding little benefit follow his treatment, sent the patient to M. Ricord.

The patient denies ever having had any venereal complaint, and at first did not know what it meant until this was explained: there is no apparent reason for his telling an untruth.

I omit the observations I made at the time on this case, or on the success of the treatment.

Feb. 26. This patient went out to-day. The ulceration has completely cicatrized; there is, however, some thickness in his speech.

CASE II.—*V . . . Eighteen Years of Age. Salle 7, No. 27.
Hôpital des Veneriennes. February 6th, 1839.*

This patient is a boy—very young-looking for his age; of a pale, languid habit of body; complaining of his throat. After well rinsing out the mouth and throat, and before a good light, I examined carefully the affected parts. The uvula is completely destroyed; the amygdalæ are likewise in great part wanting; the back of the pharynx is covered with a thick ropy mucus, which, on being removed by means of a probe and lint, shows a partly ulcerating, partly cicatrizing surface, covered with large flat fungous granulations, irregularly scattered over the throat, and looking very irritable. The pulse is feeble, and the appetite bad.

The patient states that previous to his twelfth year he enjoyed excellent health, when he was affected with fistula lacrymalis of the left side. Has never had either clap or chancre, and the genital organs are very small; no traces of chancre to be observed. He has lived in Paris five years with his parents; is well fed and lodged. A twelvemonth after the occurrence of the fistula, for which he was treated by M. Recamier, his throat first became bad; for this he took sarsaparilla and pills, two daily, for a long time (he says from October to March). He left the hospital in March cured, and remained so for eighteen months. He again entered the Hôtel Dieu, and was treated from October to January; not being successful this time, the case was considered a fit one for the Venereal hospital, and he was sent to M. Ricord.

I find in my note-book, on the 22d of February, this patient was dismissed for refractory conduct, very nearly well of his complaint.

Should my readers now admit the existence of chronic ulcerations of the throat following acute inflammatory affections, or if they consider that I have adduced proof of a scrofulous affection (a thing not unfrequently to be seen in institutions dedicated to strumous diseases), they may expect to learn what are the means by which they can be distinguished from the tertiary form above spoken of. To these distinctions I shall now particularly allude.

When the patient denies the pre-existence of primary sores, and his assertions are borne out by other appearances which corroborate them, such as the absence of cicatrices, of marks of secondary or tertiary symptoms, past or present, we have negative evidence of great importance in arriving at a correct diagnosis.

I may here observe, however, that the pre-existence of chancre does not enable the surgeon to arrive at the conclusion, that the affection which the patient is at present laboring under is syphilitic. In the present day, to arrive at a correct opinion, more is required than the pre-existence of syphilis, for we do not say *post hoc, propter hoc*; and I have seen several cases of patients who have acknowledged that they had primary sores, yet I have believed the affections to be scrofulous, for reasons to be stated below; hence neither the non-avowal of patients of having had chancres, nor their acknowledgment, will of itself influence our diagnosis. Caution in either case must be used.

The positive evidence of an ulceration being scrofulous may often be derived from the general condition of the patient, his age, and the position of the ulceration on the back part of the pharynx, although at a later period it may extend to other parts of the throat.

The history of the case, and the little probability of its being scrofulous, from the conditions noted above, will induce the belief that an ulcerated throat may often depend, like others, upon chronic inflammation, and on an atonic state of the system.

I have lately seen a case, under Mr. Lawrence, at St. Bartholomew's hospital, which induces me to ask if scurvy will not produce a similar affection of the throat to syphilis, although I am not aware that authors who have treated specially of scurvy allude to it. The case is the following:—

A boy, eighteen years of age, entered Henry the Eighth ward, complaining of his throat; on examining it, a large ulcer was apparent on the back part of the pharynx, of some months' standing. He was

in a weak state of health, had lived badly, and dwelt in a low, confined alley. The peculiar feature of the case was the spongy, fungous state of the gums, and the existence of petechiæ on various parts of the body, particularly on the abdomen. Now this patient, some years before, had a chancre, probably a phagedenic one, for on his entrance we observed on the prepuce a cicatrix, as large as a shilling, which was much lighter colored than the surrounding skin. The sore, the patient stated, was healed in about a month after its appearance, and from that time to the present date, October, 1840, no symptom of any kind followed ; and, with the exception of the throat, the gums, and the petechiæ, no traces of secondary or tertiary syphilis existed.

Was, then, this a scorbutic affection ? I leave others to decide ; for my own part, my opinion will be decided by future experience. I might mention that the patient improved under occasional fumigation, and went out nearly well, after the use of the hydriodate of potash and a nutritious diet.

It still remains for me to speak of the diagnosis between the tertiary syphilitic affections, and cancer of the tongue and throat.

The indurated state or tubercles on the tongue have often been mistaken for cancer, and the distinction is not a little difficult even to those who have had frequent opportunities of seeing both complaints. The principal points of difference are, however, the following :—

The History.—On this sore little information can usually be derived, inasmuch as cancer may come on in persons who have suffered from chancres ; instead, then, of clearing up the diagnosis, the history of the case would only mislead the practitioner. I have stated that tertiary symptoms may appear, although the patient *believes* and *states* that he has never had primary symptoms. Hence too much stress must not be placed on the history alone.

Previous to ulceration of the tubercles, I have noticed that the *number* and *position* of the indurated points are different in the two affections. Thus in cancer there is usually but one, in syphilis there are several. In cancer the disease is seated at the side of the tongue, close to the teeth, about opposite the first molar. In syphilis it is the dorsum of the tongue which is affected.

The same rule has been observed when the affection takes on an ulcerative character ; then the characteristic features of the two complaints become more marked. In syphilitic affections, the ulceration is covered with a dirty, foul secretion, and the glands in the

neck are but slightly swollen. In cancerous affections the ulcers are clean, florid, looking as if they were about to throw out healthy granulations ; yet weeks and months go on, and no restorative process is set up, and the glands in the neighborhood become of that stony hardness so peculiar to cancer.

I have been able to place but little confidence in the general appearance of the patient, for in both affections a yellow cadaverous look is met with.

The cautious surgeon will, however, not readily give an opinion until he has commenced the treatment ; it is the best means of diagnosis, for I need not say that the one can be only palliated. Happily surgery can triumph over the other.

PROGNOSIS.—This must be gathered from the preceding pages : it follows that it must be much modified by *form, stage, complications,* condition of the patient, number of relapses, and the treatment that has been pursued. The surgeon should always inform his patient that the disease can be checked, but he must be given to learn, at the same time, that no means exist of regenerating bones or mucous membrane ; otherwise the surgeon will often be blamed for causing that which the disease has done previous to the time he was consulted.

TREATMENT.—The indications of treatment are few, and must present themselves at once to the mind of the reader from what has preceded. In the first place, every exciting cause must be removed which can in any way aggravate the complaint. In public practice, no sooner does the patient enter an hospital than the effects of a warm bed, nutritious diet, and abstinence from spirituous liquors, at once suffice to relieve many of the symptoms. The surgeon's next object is to reduce the local irritation ; for this purpose a sedative mucilaginous gargle is very useful, together with a few leeches applied to the angles of the jaws, if the condition of the patient allow it ; small doses of morphia will tend greatly to quiet that general irritability of system so frequently found combined with ulcerations of the throat ; at the same time tonics, particularly the vegetable ones, with good, nutritious, unstimulating food, will be most efficacious. As the contact of the teeth with the ulcerating surfaces is very prejudicial, a layer of lead, such as is used by grocers, may be employed as a protective means ; and it will be often necessary to attend to the state of the gums and teeth, for the tartar accumulated around them causes great local irritation.

When all these preparatory steps have been taken, the surgeon

may then commence the employment of that heroic remedy, the hydriodate of potash; given in doses of three grains at the commencement, this substance should be increased in quantity every five days, and patients have, without danger, taken one hundred and twenty grains in the twenty-four hours. Its first effect is to increase all the secretions, and the appetite is not the last to receive an impulse from this salt. Its principal action, however, is on the ulcerations; the secretion is first checked, then altogether stopped; healthy granulations spring up in the centre of what was lately a slough, and often require to be repressed by the nitrate of silver. In some of the more chronic cases a local stimulant is necessary, a gargle is often all that is required, composed of iodine and water, in the proportions of ʒj to ʒviiij., of water, or the edges of the ulcer may be touched with the tincture of iodine. The appearance of the throat after cicatrization is very curious; bridles of a thick mucous membrane, of a peculiar *mother-of-pearl* white, are seen running in different directions, which differ much from the surrounding mucous membrane; to the uninitiated these white bridles look like so many patches of lymph, and I have often wished to remove them with a probe, so convinced was I that a mere layer of lymph was seated there.

This is the usual rapid progress of the cure. Examples, however, occur which cause the surgeon to despair; the local irritation does not diminish, and no attempt at cicatrization is observed. In such cases the presence of a portion of dead bone may be anticipated, and can usually be detected by a probe: as long as this remains, it must cause mischief; it should be removed with caution as soon as it can be detached, for however efficacious the hydriodate of potash may be, it can not produce absorption of a dead portion of bone; it is the forceps of the surgeon which most quickly gets rid of it, and the case will go on prosperously afterward.

When complete cicatrization has occurred, the deformity that remains is often considerable, though not to such an extent as may have been expected; the speech of the patient is not distinct, in consequence of those bridles of mucous membrane above spoken of, and if a communication exist between the palate and nose, that peculiar nasal twang betrays the nature of the accident. These are permanent defects that medicine can not cure, but various mechanical contrivances, called obturators, may be employed with considerable success.

As regards any operation for the purpose of bringing the sides of

these fissures together, it should never be sanctioned ; the tissues around are not highly organized, and union by the first intention will not take place ; the knife detects a lardaceous substance, which readily sloughs ; so that all rhinoplastic operations are now given up, more especially as great relief may be obtained from the obturators. It must not be forgotten, however, that as foreign substances they will produce great irritation, and may require to be left off.

SECTION IV.

SYPHILITIC AFFECTIONS OF THE EYE.

THE eye, like the skin and throat, may become affected by syphilis in both its secondary and tertiary forms ; the importance of the organ, and the rapidity with which the disease can destroy the tissues composing it, deserve the particular attention of the reader.

SECONDARY AFFECTIONS.

AMONG the patients admitted into the London hospitals, covered as they often are with scaly and tubercular eruptions, the surgeon may frequently corroborate the statement of Mr. Lawrence, "that syphilitic eruptions frequently appear on the external surface, and on the ciliary margins of the lids." We may often be able to trace the gradual changes between the affections of the skin and mucous membranes, corroborating the statements we have made elsewhere, that they are but one and the same disease, appearing on tissues which closely resemble one another. In some instances the corners of the eyelid have that cracked, scaly appearance, well delineated, as occurring at the angles of the mouth, in plate V., fig. 4.

In other cases a distinct papule, one half like psoriasis, the other similar to mucous tubercle, may be witnessed on the ciliary margin ; more rarely, we observe a softened condition of the mucous membrane, which is reduced to a sort of pulp, and at the same time the conjunctiva is very red and flocculent ; one or more small pustules of the size of pins' heads may appear on this softened membrane.

I have not yet seen the bleached excoriated surface on the palpebra so frequently seen on the mouth and tongue, though analogy would expect us to meet with it. Usually, the symptoms above described

do not occur alone. There is more or less redness of the tunics of the eye ; there may be œdema or inflammation of the lids, and usually the body bears marks of other syphilitic eruptions, particularly the scaly or tubercular form, and the secondary symptoms as they occur on the throat, head, anus, &c.

On the subject of PROGNOSIS, DIAGNOSIS, and TREATMENT, I have nothing to add ; it must be guided by the same indications that have been already so fully alluded to elsewhere.

The conjunctiva is not the only component part of the eye which may become affected. The iris may simultaneously or consecutively show signs of disease, and this leads me to speak at length of this affection.

SYPHILITIC IRITIS.

HISTORY.—If the reader believes that any particular symptom of syphilis began to exist only about the period that we first meet with descriptions of it, he must conclude that syphilitic iritis first appeared about the year 1801, when Schmidt of Vienna* wrote an essay on the subject.† Since this period few authors on affections of the eye, or venereal diseases, have neglected to notice the complaint, considering it more or less confidently as a syphilitic symptom. I should not dwell upon this fact, did it not serve to explain differences of opinion on the history of venereal diseases, and show how easily so important a symptom as iritis was overlooked by them, and by

* Since writing the above, I have obtained possession of a very rare book, written in 1773, entitled, "Exposition Anatomique des Maux Vénériens sur les Parties de l'Homme et de la Femme," par M. Gautier Dagoty Pere. Paris, fol., plates.

He says, page 9 : "It happens that persons become blind, not by an obstruction of the optic nerves, as in cases of the GOUTTE sereine, but by a thickening of the vitreous and crystalline humors, which lose their transparency, preventing the rays of light from falling upon the retina. The salt and acid nature of the virus is very fit to produce this effect upon the humor which it coagulates. We observe an infinity of concretions of the aqueous humors, which seem to form cataracts, which moving about in this humor cause objects to appear as if pierced, like a spider's web, or as little flies ; this is occasioned by a relaxation of the glands, which allows these lymphatic concretions, thickened by the virus, to pass into the body of the humor, thus confirming my hypothesis. It seldom happens that a person recovers from these affections by means of the sovereign remedies (*les grands remèdes*).^{*} However, patients are met with who do recover sufficiently well to find their way about, read and write, which they can not, however, previous to submitting to these sovereign remedies.

† Nachstaar und Iritis Nachstaar Operationen, 4to.

^{*} *Grands remèdes* meant, in 1773, to employ frictions until a patient spat one or two pints of saliva in twenty-four hours, and the salivation was to be kept up eighteen or twenty days. I quote the words of the author at page 15.

authors of the present day. If, then, modern authors, previous to 1801, have failed to describe iritis, or connect it with syphilis, can we be surprised that those who wrote previous to 1496 should not have accurately described primary symptoms, or connected them, as we do now, with general infection and various affections of the skin which we call secondary symptoms?

On looking into the most modern treatises, I find that Mr. Lawrence describes a distinct syphilitic affection of the eye. Mr. Tyrrell speaks simply of iritis, although he admits "that a specific taint, by its influence upon the system, no doubt, in many cases, modifies the local disease."

Mr. Bacot seems to have no doubt that syphilitic iritis is a consequence of general contamination of the system. Sir Astley Cooper states, however, at page 299 of his lectures, "I have, I must say, considerable doubt on the subject, for I have never met with a person laboring at the same time under any other secondary symptoms of syphilis, with eruptions or nodes on the bones."

M. Ricord speaks of syphilitic iritis, and gives a brief description of it in his Notes on Hunter.

Mr. Carmichael likewise admits a *venereal* iritis, although he says it is difficult to distinguish it from the other forms, except by the presence of some other venereal symptoms.

My own opinion has been greatly modified within this last twelve-month. During the period I carried on my investigations on venereal diseases in Paris, although my opportunities of seeing disease were immense, I witnessed so few cases of iritis, compared to the great number of syphilitic complaints, that I was induced to deny any relation between them. At one period of my studies I would have corroborated the statement of Sir A. Cooper, and I believed that the few cases which I witnessed were mere coincidences, so slight were the secondary symptoms which attended the complaints; and it was my intention to exclude syphilitic iritis from this treatise, so unsatisfactory were its diagnostic signs. I even could not go so far as Mr. Tyrrell, and believe that "a specific taint, by its influence on the system, no doubt, in many cases, modifies the local disease." When, however, on my return to London, I wished to corroborate my views, my confidence became shaken, and I had not long witnessed the severe cases to be met with weekly in St. Bartholomew's and other London hospitals, before I began to see the correctness of Mr. Lawrence's description, as given in his valuable work on "Venereal Diseases of the Eye," without, however, being able to diagnose the

affection always from that which is the consequence of rheumatism or gout, by the symptoms which, as I shall presently show, are not always to be met with.

SYMPTOMS OF SYPHILITIC IRITIS.—Were this treatise one which professed to treat on affections of the eye, I might be induced to dwell at great length on the various symptoms of iritis, but I must here refer such of my readers as would require a knowledge of them to Mr. Lawrence's admirable description. For my object, a very cursory enumeration will be sufficient.

The syphilitic affection of the iris is usually ushered in by considerable constitutional disturbance, headache, inability to sleep from constant pain over the brow, which is aggravated toward evening; but, as Mr. Lawrence observes, even in acute cases such symptoms exist only in a slight degree, or are entirely wanting.

Mr. Tyrrell lays great stress, and I think deservedly, on the state of the general health and constitution; in nearly all the case that have come under my notice, the powers of the system were depressed by bad treatment, insufficient food, exposure to all the inclemencies of the weather, frequent attacks of syphilis, excesses of all kinds, and, lastly, severe depletory measures; even in cases where these circumstances have not been so very apparent, the result has shown that the power of the pulse was usually deceptive, and the disease rarely accompanied with evident inflammation; when blood is drawn from the arm, it does not present a firm coagulum, but is sify, dark-colored, and contains more than its average quantity of serum. The skin is dusky or cadaverous, and often covered with eruptions, as I shall have again occasion to allude to.

When the eye is viewed under a strong light, intolerance of that agent is very marked, or it may be little affected; usually, there is more or less external redness of the eye, in the form of a red band round the cornea.

"The iris," says Mr. Lawrence, "becomes changed in color; a light-colored iris assumes a yellowish or greenish tint; occasionally it is distinctly yellow; and if the eye be blue, a bright green is sometimes seen. Generally, however, the tint, whether yellow or green, is of a dull, muddy cast, and darker than in the sound state." When the iris is naturally dark-colored, it presents, when inflamed, a reddish tinge. Its natural brilliancy disappears, and its beautiful fibrous arrangement is lost, absorbing the rays of light instead of reflecting them, as Mr. Tyrrell observes. The color of the iris is not only thus altered in consequence of the effusion of lymph into its inter-

stices, but it becomes thickened and fringed. Coagulable lymph is likewise effused in distinct globules or masses, usually presenting a reddish color on the surface or margin of the iris, which appearance has been compared by Beer to condylomata. There is, at the same time, partial closure of the pupil, or adhesions of the iris may occur, and the pupil be drawn in a variety of directions; but none of these changes are peculiar to syphilitic iritis. Vision is of course impaired in various degrees.

Syphilitic iritis may occur at any period of life; Mr. Lawrence mentions two cases in children: in one the child was eighteen months old.

But the disease is most frequently seen during the middle period of life, as persons are most liable to syphilis at this age.

In analyzing the cases which Mr. Lawrence has reported, I find that one man out of the seventeen had arrived at the age of fifty-three years. Among the thirteen cases of females, two are stated to have been thirty-five years of age, and one to have arrived at forty-five. Now, if any deduction can be drawn from statistics of thirty cases of syphilitic affections of the eye, I might state that in this number seventeen occurred among men, and thirteen in women; this proportion of females is large, if compared with the number of males and females, who are laboring under secondary symptoms, for ten men apply at hospitals for one female. This greater frequency in the female I must attribute to her greater exposure to the exciting causes—a subject I shall presently allude to.

It is remarkable, likewise, in these cases, that we find so great a proportion of syphilitic iritis among persons of advanced life. Syphilitic affections are rare at this period compared with the earlier ones, and yet no less than four cases exist in thirty. This corroborates an observation I have myself made, that, *cæteris paribus*, iritis is more frequent at the later periods of life, and advanced stages of secondary symptoms. Mr. Lawrence's thirty cases further prove that syphilitic iritis occurred twelve times in persons of good or moderate constitution, and five times in cases of an opposite nature. In the thirteen other instances, no notice is taken of the condition of the patient, but it may be inferred from statements made in the course of treatment, that the constitution was greatly impaired. This, again, agrees with an opinion I have above advanced, which I find coincides with the statements of Mr. Tyrrell.

CAUSES.—In the preceding paragraphs I have traced the cause to constitutional infection, in common with syphilitic secondary symp-

toms, therefore it is not my object here to allude again to this cause ; but as every case of secondary symptoms is not accompanied with iritis, it is necessary for us to study the exciting causes, as they may lead to the prevention of the complaint.

On consulting authors, however, I have been able to gain but little information on this point ; I must, therefore, depend upon my own observations. I have already mentioned that the disease is rarely met with in Paris, compared to London ; of this fact I have no doubt ; but of its explanation I am not so certain. I believe it to depend upon the following circumstances : the French prostitute, from the strict vigilance of the police, rarely suffers under any severe form of secondary symptoms ; because the primary ones are instantly attended to, and should secondary affections supervene, measures are at once taken to check their progress ; hence this, then, sufficiently accounts for the fewer number of cases among this class of women.

Why iritis is rarely met with among the male population, I was some time in discovering, but my investigations have led me to the following conclusion : those patients, or at least the majority I have seen in London, belong to one or other of the following classes : some appertain to the poor, half-starved, emaciated Spitalfields weavers, who have no creature comforts, are ill fed, badly clothed, and worse lodged ; disease has a greater hold upon them than the well-fed mechanic.

Other patients in London, who suffer under iritis, belong to the class addicted to drinking large quantities of porter or gin ; they are bloated and unhealthy, and furnish a large number of those afflicted with severe syphilitic affections.

In Paris these two classes barely exist. Where will a surgeon see a being that he can compare to the sickly mechanic of London, who has but work three days in the week, and spends his earnings in gin ? Neither gin nor porter is indulged in at Paris by the lower classes, and hence, in that capital, we do not witness those deplorable pictures of penury, gin-drinking, and dissipated habits, to be met with at each step in our London hospitals.

I am inclined, then, to attribute the exciting causes of iritis to exposure, when the system is depressed or over-excited by want, cold, damp, dram-drinking—for it is in such cases that we witness the most formidable instances of iritis. I have clearly traced more than one case of iritis to cold caught from the patient's bed being exposed to a draught of air. In most cases there exists an assignable cause for the affection of the iris, independent of the syphilitic infection.

The PROGNOSIS may, generally speaking, be favorable, but must always depend upon a variety of circumstances. When seen in the early stages, and the constitution is good, a favorable result may be always anticipated ; but when the disease has been left unchecked by treatment, or has become chronic in consequence of ill-directed treatment, or the lymph effused has become organized, or the constitution very much reduced, the surgeon should not too favorably judge of the case. Even here much may be done, although too often the patient escapes with an impaired organ and feeble vision. I should here state that relapses are not unfrequent.

DIAGNOSIS.—It is not my intention in this section to enumerate all the diseases with which iritis may be confounded, or to speak of the various means which we must employ to distinguish the syphilitic from the other forms ; I shall only allude to those which will most materially assist the student, as the greater number of those that have been vaunted are now found to be useless.

The *History* of the case is a circumstance which may either assist or mislead the surgeon, when taken alone ; yet it is the diagnostic sign that I mostly rely upon.

When a patient has had syphilis, it does not follow, as some would believe, that iritis depends upon it, for, I have had previously occasion to observe, a certain period must have elapsed, and this will often be modified by the treatment which has been had recourse to. Usually, when mercury has not been employed, the patient who labors under syphilitic iritis will tell you that three months after a primary indurated sore, eruptions appeared on various parts of the body, which continued, and some weeks later iritis followed. When mercury has been used, the secondary symptoms occur later, and so does the iritis ; but even here a twelvemonth seldom passes between the chancre which has preceded, and the iritis which is a consequence of it.

Under the head of history I may mention the other coexistent symptoms. Thinking that statistics may, in a case like this, be useful, I have analyzed Mr. Lawrence's thirty cases. I find that in *nineteen male patients* iritis was accompanied—four times by a papular eruption ; once by sore-throat ; seven times by a scaly tubercular eruption ; by no symptoms in three cases ; no notice is taken of an eruption in one case ; in three cases, eruptions not specified are said to have occurred.

In the eleven females the iritis was complicated—twice with the papular eruption ; twice with sore-throat ; three times with a scaly

eruption ; with the pustular once ; condylomata were present in three cases ; one case presented no other secondary symptom ; the periosteum was affected in one case ; the remaining one had a primary sore.

In forming a diagnosis, then, these thirty cases lead to the conclusion that great stress should be placed upon the coexistent secondary symptoms, and my own experience leads me to infer, that on them alone our diagnosis can be founded, for all other supposed syphilitic characters may be wanting. Ophthalmologists are now convinced that the color of the lymph, the direction of the adhesion of the pupil, &c., are signs common to all forms of iritis. When then iritis depends upon syphilis, it rarely occurs as a sole symptom ; in fact, so rarely, that it becomes a question if it be truly syphilitic iritis.

The above statistics prove, most conclusively, that iritis occurs with a peculiar train of secondary symptoms, usually with the scaly, tubercular, or papular eruptions. Mr. Lawrence mentions having met with one case accompanied by a pustular disease, resembling scabies purulenta ; but at page 231 he mentions that there exist likewise copper-colored scaly blotches. It is curious that ulceration of the throat was so rarely met with by him. In almost every case of syphilitic iritis I have witnessed, it has been attended with a superficial excoriation. There is but one solitary case in which the periosteum was affected. This agrees with my view of the subject ; hence I have with reason placed it among the secondary symptoms of syphilis.

The preceding cases likewise prove that primary symptoms may not have disappeared when the iritis commences, as happened in five instances.

TREATMENT.—The consideration of the causes will often enable a surgeon to prevent the occurrence or recurrence of the affection, and I shall not again refer to them, or state how these exciting causes should be avoided.

When the disease is at its commencement, and the general symptoms run high, it may be necessary to deplete generally and locally ; but this treatment should not be too long continued. Mr. Tyrrell has related several interesting cases to show the inefficacy of antiphlogistic measures when carried to excess.

The preceding pages, moreover, show that the affection is not one of those complaints which would probably be benefited by bloodletting ; and experience confirms this view of the subject. The indications are, to relieve pain, which is said to depend upon inflammation of the unyielding sclerotic coat ; to check that inflammation, prevent

the effusion of more lymph, and cause the absorption of that which is already poured out ; destroy any adhesions the iris may have contracted, and, by dilating it, allow more light to enter the pupil.

These indications are best fulfilled by mercury ; not, however, given in the manner that has been previously recommended. The importance of the organ, and the rapidity with which mischief may occur, demand a more liberal use of the mineral. The opponents of mercury are here unanimous in favor of its utility ; it is the neutral ground upon which we all meet. The preparation that modern surgeons prefer, is calomel and opium, in the proportion of two grains of the former to a quarter of a grain of the latter, given every six or eight hours : and as the disease yields, the frequency of the doses may be diminished.

There are some observations on the administration of mercury in Mr. Tyrrell's work, which will amply repay the attention of my readers. As that gentleman so justly observes, mercury is of invaluable service even in the worst cases and most depressed states of constitution, provided we at the same time support the system by generous diet and a small quantity of stimulus. From a non-observance of this plan, mercury has fallen into discredit in some people's hands.

In very weak and feeble constitutions, it may even be necessary to renovate, by tonics and stimulants, the powers of the system previous to commencing with mercury, which may be then employed as above described.

When mercury gives rise to unfavorable symptoms, it should, however, not be persevered in ; its disagreeing with the patient will, however, usually depend upon inattention on the part of the patient to diet, or to some other cause.

The other indications are fulfilled by drawing blood from the temples, rubbing the brow with belladonna, and by attending to the state of the digestive organs ; these, and the indications we have given, will usually bring the case to a favorable termination.

TERTIARY SYMPTOMS

GENERALLY appear on the eyelids in the form of ulcerations, for the first description of which we are chiefly indebted to Mr. Lawrence. I have lately witnessed several cases which that gentleman has had under his care, and they correspond in every respect to the account given in his treatise. Syphilitic ulcerations may commence on the papular secondary eruption which occurs on the eyelid, and which has been neglected or irritated ; more frequently, however, as

Mr. Lawrence observes, "the ulcer commencing on the ciliary margin, where it is generally described as beginning with a small hardness supposed to be a sty, may occupy the whole thickness of the lid, involving all its tissues."

The surface is usually grayish, with bloody points, the surrounding edges sloughy, and considerable inflammation may supervene.

This form of ulceration I have not yet seen occurring without other tertiary symptoms. Mr. Lawrence, however, cites two or three such instances, but admits that they occur most frequently with other affections. There are foul sores on various parts of the body, rupia, exostosis, periostitis, nodes, &c. The cases we have met with have not been in young people, but those advanced in life, and who have been reduced by excesses, or who are naturally of bad constitutions ; and, in all the cases we have witnessed, these ulcerations have occurred at a very advanced period of syphilitic affections, generally eight or ten months after primary symptoms.

TREATMENT.—Nearly all the cases I have witnessed of these affections have been treated by mercury, and, as Mr. Lawrence states, "I have found the free use of mercury to be the quickest and most effectual mode of arresting and curing the disease. As soon as its influence on the system was produced, the sores lost their syphilitic character, and then quickly healed."

Notwithstanding this opinion, coming from such high authority, I would pause before prescribing the mineral. Modern surgeons find so much benefit following other means employed in tertiary symptoms, that I may perhaps be excused for recommending a milder treatment, and I believe that the cases I have seen *treated* and *arrested* by mercury would have yielded nearly as rapidly under other means.

From what I have witnessed then, I should recommend the surgeon to lose sight of the specific disease, and treat the case on general principles. A warm bed, good and generous diet, will alone often tend to put a stop to this species of ulceration ; local and general pain may be relieved by the internal use of morphia, the saturated solution of opium and warm poultices should be prescribed to the ulcers, and the hydriodate of potash, in doses above alluded to, may be combined with tonics. I have not yet seen this treatment fail in arresting ulceration ; but I must likewise state that my experience has been limited. Did I, in spite of these means, observe the ulceration increasing, I would without scruple immediately resort to mercury, to prevent the loss of substance which would occur in the lid, if the disease were allowed to go on uncontrolled.

SECTION VI.

SYPHILITIC AFFECTIONS OF THE TESTICLE.

OCCASIONALLY we meet with an affection of the testicle coming on at a late stage of secondary symptoms, which has been variously termed by different writers. Sir A. Cooper has a chapter on the "VENEREAL INFLAMMATION of the Testicle." M. Ricord entitles the affection SARCOCELE SYPHILITIQUE.

SYMPTOMS.—Some months after the occurrence of primary symptoms, the patient will complain of vague pains in one or both testicles, particularly felt toward night, and which shoot upward toward the loins. In other instances no pain is felt, and the patient is surprised at finding one or both testicles gradually enlarging, and he consults the surgeon merely on account of their additional weight. On examination by the finger, the organ will be found enlarged, heavier than usual, but without discoloration of the skin. The surface of the testicle will be more or less regular; its elastic feel will, however, be lost; the epididymis often participates in the enlargement as well as the spermatic chord, and some fluid may be present in the tunica vaginalis. The functions of the organ will be generally impaired, but secretion of sperm still takes place, and in nocturnal emissions no blood will be observed mixed with the seminal fluid.

PATHOLOGY.—Sir Astley Cooper, at page 104 of his work on the testes, says: "When the venereal poison affects the testicle, it probably attacks the tendinous structure—for example, the tunica albuginea, and thence extends into its interior fibres, and not its tubular part; but this I allow to be hypothetical, and am led to that opinion from the structure of that part most resembling the periosteum in its tendinous composition, and from the very ready and complete recovery of the organ; but I wish the reader to understand that I have had no opportunity of dissecting this disease."

CAUSES.—The *predisposing* causes are similar to those we mentioned when speaking of epididymitis; we, therefore, shall not again allude to them. The *exciting* cause is constitutional infection, which seems in particular constitutions to give rise to the affection.

The DIAGNOSIS must generally be founded on the history and co-existing secondary symptoms, as well as on the absence of the symptoms peculiar to other affections of the testicle, which it is not our intention here to allude to.

The PROGNOSIS is usually favorable: under judicious treatment we may expect to see the affection rapidly disappear, and the function of the organ will be recovered when the disease is not of very old standing; under opposite circumstances, atrophy of the testicle, or a scrofulous or scirrhous degeneration may supervene.

TREATMENT.—We have had occasion to speak several times, in the course of this work, of the wonderful action of mercury; it is no less beneficial and rapid in its effects when given in syphilitic affections of the testis; in fact, little else but mercury need be prescribed; the chronic course of the complaint calls generally for no other treatment, unless it be to support the organ; we have occasionally seen resolution of the complaint expedited by compression, with strips of mercurial plaster, as recommended at page 88.

CHAPTER III.

TERTIARY SYMPTOMS.

DEFINITION.—By the term *tertiary symptoms*, we mean those constitutional syphilitic affections usually included under the name of *nodes, inflammation of the periosteum, exostosis, caries, and tubercles of the subcutaneous and submucous cellular tissue*; like secondary symptoms, they are not inoculable, but are incapable of transmitting, hereditarily, constitutional syphilis.

HISTORY.—Previous to Hunter, these symptoms were confounded under the term secondary effects of syphilis, or constitutional syphilis. That original observer, without placing them in a division quite apart from the rest, thought it, however, necessary to distinguish them in some measure from secondary symptoms, properly so called; hence we find them placed together, and classed under Paragraph III., in his work, which is thus headed: “Symptoms of the Second Period of Constitutional Syphilis.”

M. Ricord, in his classification, preferred separating them from secondary symptoms, and making a distinct division, which he has called *tertiary symptoms*. In the following description it will be seen that they differ from secondary symptoms in various points, and to a sufficient extent to authorize us in placing them in another division.

Though they depend upon chancre, they follow it after a much longer interval ; they are seated in other and deeper tissues, can not be transmitted from mother to child, but are capable directly of producing in the offspring a scrofulous diathesis.

CAUSES.—Those who have seen syphilis of late years treated by simple means, without the aid of any mercury, must, like ourselves have been able to observe the natural history of the disease uncomplicated with those effects which we admit mercury *may* produce. In such cases we have been able to trace tertiary symptoms to the effects of the syphilitic virus, at first committing local ravages, next infecting the constitution, and, lastly, giving rise to such lesions as we are about to speak of. In consequence, then, of these symptoms appearing when no mercury or any other treatment has been had recourse to, from their occurrence usually after a certain period, from the primary introduction into the economy of the syphilitic virus, surgeons are agreed to attribute them to constitutional syphilis.

It would be wrong to suppose, however, that syphilis, when left to itself, universally produced these effects. Experience has shown that in the majority of cases, fortunately for humanity, such does not happen ; this, then, brings us to the consideration of the

PREDISPOSING CAUSES.—It is not so easy to discover the predisposing causes of tertiary, as it was of secondary symptoms ; however, it is to the constitution that we may generally ascribe them, and to the treatment which has been null or injudicious ; still, tertiary symptoms will occasionally occur, in spite of all our endeavors. Such cases are, however, of very rare occurrence.

The constitution, as a predisposing cause, has a considerable effect. Observation shows that it is in persons of lymphatic temperament that syphilis commits the greatest ravages ; this we have seen throughout the whole history of the disease, and is more especially true of this stage ; for, as we shall presently see, scrofula and tertiary symptoms have many points in common. Let it not be supposed, however, that it is only in the pale and the emaciated that we see such effects, for syphilis often appears in very severe forms in stout and plethoric individuals. The *previous habits* of the patient will act as a powerful predisposing cause : thus, a constitution naturally good, but depressed by dissipation, poverty, insufficient clothing, exposure to damp or unwholesome air—in fact, all those causes which induce secondary symptoms, have a great tendency to produce likewise the tertiary form.

Previous disease will naturally have a great influence ; in the first

place, we may mention the existence of secondary symptoms. It is a fact which can not be denied, that where syphilis has produced secondary symptoms, with or without treatment of the primary sore, the probability, is, that the tertiary form will sooner or later make its appearance, showing a tendency in the constitution, which, if not controlled, will produce the worst effects. The severity of the form of secondary symptoms, the late period at which they have been treated, the obstinacy with which they have resisted, and the length of time the *syphilitic temperament* has existed, are so many predisposing causes, and will furnish the surgeon with so many indications which may induce him to judge of the probability of their occurrence.

The Treatment of the Primary and Secondary forms may act as a very powerful predisposing cause. We shall not here repeat what we said, when speaking of primary sores, under the head Predisposing Cause of Secondary Symptoms ; the same observations apply equally to tertiary symptoms. With respect to the treatment of secondary symptoms, daily observations prove that if they be treated without mercury, tertiary symptoms will frequently occur ; that even when mercury be employed at an early period of their (secondary symptoms) occurrence, the appearance of tertiary symptoms can not be prevented ; that in such cases, provided the mineral has been used judiciously, they will, however, be slight ; lastly, that if mercury have been indiscriminately used, or if the precautions spoken of under the chapter on the employment of mercury, be not attended to, tertiary symptoms will not only occur in spite of, but become complicated with, those effects which depend upon the mineral ; thus, the constitution will be depressed, and the two diseases carried to an extent that now fortunately is rarely witnessed.

COURSE.—This stage of syphilis has a peculiarly chronic character. In the majority of cases, and under the circumstances above described, the secondary form passes insensibly into the tertiary, for we should be guilty of a great fault, did we lead our readers to suppose that the limit between the two stages is always distinct ; in the natural course of syphilis, this transition is insensible, without any accession of general symptoms, the tertiary form appearing frequently during the existence of the secondary, in the same way that the latter may come on during that of the primary. Under other circumstances, from treatment, care, &c., the secondary symptoms have successively disappeared and returned ; and, lastly, assume the tertiary form.

Finally—and these are by far the rarest cases after the treatment

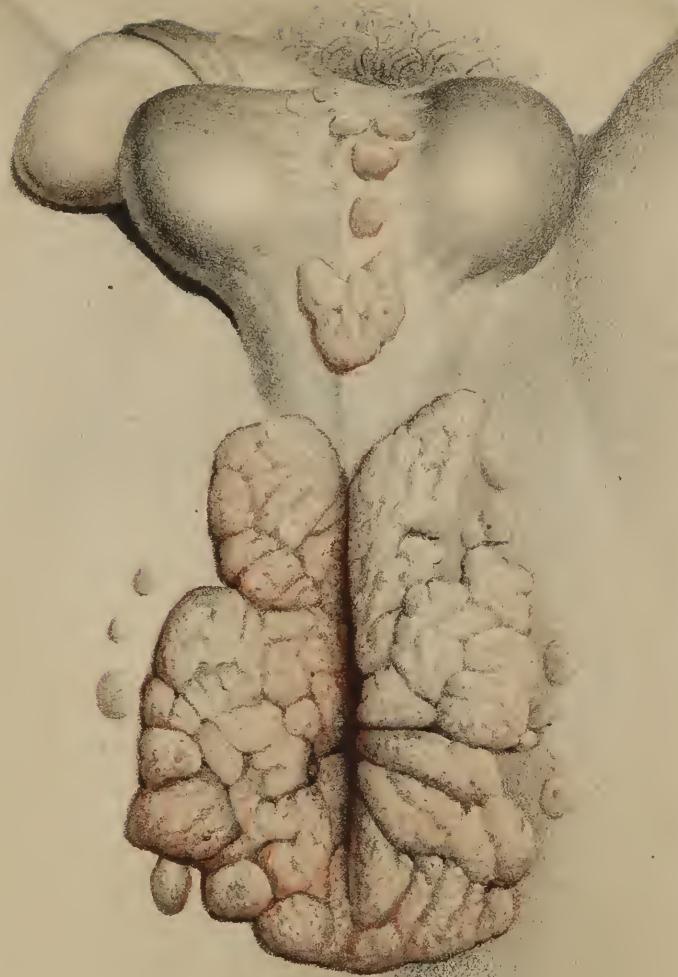
of a primary indurated sore by mercury—a considerable lapse of time may pass away, and secondary symptoms do not follow ; when, after exposure to cold, from disease or some exciting cause, tertiary symptoms all at once declare themselves, at first under a slight form, but successively increasing in severity. Such cases, though rare, we have met with ; and they further prove the protective power of mercury, though they militate against the idea of its specific powers.

The COMPLICATIONS are various ; inflammation, gangrene, scorbutic diseases, scrofula, may occur, masking altogether the disease, which gradually loses its specific appearance, and degenerates into a general disease of the economy. Of course, as one or other of these complications occur, so will the course of the tertiary symptoms be altered, and the termination be different.

The PROGNOSIS is always grave ; it shows that syphilis has made deep inroads on the constitution, and that its cure will require time, and a treatment which demands patience on the part of the surgeon and the patient ; the latter, however, should be made aware of the precautions necessary to be taken, and the consequences of their non-observance ; although we may often triumph over the disease, we are liable to see it return ; and there are cases in which our treatment can be only palliative, or the patient, having consulted us too late, is obliged to bear the deformities which nature is unable to remove, although art may frequently alleviate them.

DIAGNOSIS.—The reader will doubtless have remarked, that as we receded from the point of primary infection, the diagnosis became less certain ; that during the ulcerative period of chancre, a positive diagnosis could be arrived at though inoculation, but when cicatrization had once taken place, we were obliged to confine ourselves to a rational diagnosis. This became more evident as we spoke of secondary symptoms ; however, we showed that there were certain features which are peculiar to secondary symptoms, as, for instance, mucous tubercles, seen in the frontispiece.

In the form we are describing, however, our diagnosis must be founded on rational principles alone, for we have no certain test. The history, the antecedents, the course, concomitant circumstances, the treatment, the character of the affections, will, if taken together, indicate the nature of the complaint, and enable us to form a diagnosis, but this should be always done with caution. The treatment must still be such, that if our diagnosis be incorrect, the remedies made use of can not be injurious. This is a rule that our readers will shortly be enabled to appreciate.



PARTICULAR DESCRIPTION OF TERTIARY SYMPTOMS.—This stage of syphilis, as stated in our definition, seems to attack the *submucous and cellular tissue*, and the *osseous system*, in preference to any others; to the description of each of these we shall now direct the attention of our readers.

Lesions of the Subcutaneous Cellular Tissue.—At a late period after the first occurrence of secondary symptoms, and in persons whose constitutions are deeply affected by constitutional syphilis, small tumors may be observed, either isolated or occurring on various parts of the body. At first the patients pay little attention to them, as they are not accompanied by much pain, and produce no uneasiness; the first notice taken of them is often some months after their first appearance; they may be hard, and unattached to the adjacent structures. When after several months they have attained the size of a hazel-nut, a distinct fluctuation may be perceived through the hard shell which surrounds them, and which is firmly impacted in the cellular tissue. The skin over them may become discolored, thin, and ultimately ulceration of the surface follow; thus the small tumor may make its way to the surface, and by one or more openings a serous or ichorous discharge take place. Fistulous openings result, and may extend by ulceration, or in consequence of inflammation coming on in the surrounding tissues, and it is kept up by the irritation of the cyst, which does not usually become wholly separated. When, however, this happens, cicatrization slowly follows, leaving a considerable depression at the point affected. No sooner, however, is one tumor removed, than another appears on some other part of the surface, or several may run through this course at once, during a period of several months. These tumors may be observed on every part of the body, we have frequently noticed them on the tongue, where, from shackling the movements of that organ, they give rise to great inconvenience, and it is from their rupture that those rents or deep crevices are occasionally seen in the substance of the tongue. Among others, we have lately witnessed a very severe case in the person of a medical man at Bordeaux, which, however, terminated in a favorable manner.

These tumors may be the only symptoms present, as in the case just mentioned; but more frequently they co-exist with affections of the bones or mucous membranes.

The tumors may exist in the *submucous cellular tissue*; at least we have observed in the throat, on the palate and pharynx, the chronic swellings which eventually are converted into the most in-

tractable ulcers ; and as the bones at first do not seem diseased, though they subsequently become so, we are justified in concluding that these tumors have their origin in the submucous cellular tissue.

Tertiary Symptoms, as they occur in the Osseous System.—The earliest notice of constitutional syphilis attacking the bones consists in pain at first of a vague or intermittent kind, like that of rheumatism ; sooner or later, however, it becomes fixed to particular bones or portions of bone, and is more severe at night ; these nocturnal pains are, however, not peculiar to syphilis ; they occur in other diseases, and depend upon the resistance made by the periosteum to any swelling of the bone itself ; thus, then, the pain is often the first symptom of inflammation of the bone ; it is, however, at the commencement, very difficult to distinguish from rheumatism, though the latter, as M. Ricord observes, usually appears at a different period, is not generally fixed, is more superficial, and attacks by preference the joints, or those portions of bone around them.

Periostitis, says M. Ricord, is a disease less frequently met with than is generally imagined ; and the effects attributed to it depend more frequently upon a superficial *ostitis* ; he, however, describes three varieties.

They have the following characters in common : they consist of small tumors, more or less circumscribed, situated most frequently on the superficial bones, as the clavicle, tibia, ulna, radius ; on the bones of the cranium, sternum, metacarpus, and particularly on those points of these bones nearest the surface. They are sometimes indolent ; more frequently, however, painful on being touched, and the finger may detect a sort of doughy feel, or fluctuation may be more or less apparent. The skin which covers them may remain moveable and unchanged. Periostitis, though susceptible of resolution, may terminate in suppuration or abscess.

The *first variety*, which is often indolent in its course, is capable of resolution. When the diseased structure is divided, we find a tumor containing a serous liquid, such as may be witnessed in scrofulous patients ; in other cases the fluid resembles synovia.

In the *second variety*, the affection may be an acute or subacute inflammatory one, and free suppuration may follow ; but in such cases we rarely find the surrounding bone sound ; whether this has taken place previously or subsequently, it is difficult to decide.

The *third variety* is more slow in its progress, at the same time that it is more painful (*suâ sponte*), as M. Ricord terms it ; that is to say, when no pressure is made upon it. On examining such tumors,

they will be found to consist of organizable lymph, which raises up the periosteum, and is capable of producing one form of exostosis.

Ostitis shows the same preference as periostitis for particular regions. Circumscribed in some cases, in others diffused, it may attack the superficial parts, or the parenchymatous structure of the bones. Although chronic in its course, it may assume a subacute form; and after having existed a considerable time without giving other indications of its presence than pain, the swelling it ultimately gives rise to betrays itself externally. This tumor, which ultimately succeeds inflammation of the bone, sometimes depends on a deposition of osseous secretion similar to the callus around fractured bones, or resembles that we have described as seen in the third variety of periostitis, and constitutes an *epigenic exostosis*, differing in form and volume, having a large or pedunculated base, and a smooth or irregular surface. In other cases the swelling may depend upon general hypertrophy of the whole thickness of the bone, giving rise to the , or *hyperostose*.

Ostitis may terminate in resolution, in suppuration or caries, in necrosis, or in induration like ivory; this constitutes the *eburnée* of French writers.

The termination by resolution easily takes place when the swelling depends on a cellular layer of bone, or on a deposition of plastic lymph. When the disease is seated in a spongy bone, those of the face for example, and particularly in the maxillary bones, suppuration readily and frequently occurs. *Necrosis*, although frequently caused by the violence of the inflammation, in proportion to the vitality of the osseous system, still more frequently occurs in consequence of depositions taking place suddenly in the tissue, or from the bone being laid bare, or the destruction of the soft parts which surround the bones, thus depriving them of their sources of nutrition.

Necrosis may occur previous to the appearance of caries, or simultaneously with or subsequently to it; most frequently, however, as may be often observed in diseases of the bones of the face, what has been considered as a necrosis is nothing less than the result of caries, by which the whole organic tissue has been destroyed by means of ulceration and suppuration peculiar to bones, leaving nothing more than the calcareous portions, which thus form a sequestrum very different from necrosis properly so called, and in which we may find the anatomical elements of the bone.

Lastly, the termination by induration, or the conversion of bone into ivory, takes place in consequence of a deposition of the saline in-

organic matter which enters into the composition of bones, together with a more or less complete disappearance of the cellular tissue.

TREATMENT.—The preventive and prophylactic treatment of tertiary symptoms will consist, in a great measure, in the employment of the same means spoken of in the preceding chapter, and in attention to the rules there laid down. We think it, therefore, unnecessary to return to that subject here. The same remark applies to causes both predisposing and exciting. The knowledge of any predisposing cause being attained, the surgeon will necessarily remove it if it already exist, or prevent its development by all the means in his power; this can not always be obtained, however much it may be desired, or the patient demands our advice too late; it then behoves the surgeon to remove, in as short a time as possible, the effects produced; and this brings us then to a consideration of the

CURATIVE MEANS.—In M. Ricord's work on the treatment of tertiary symptoms, which, before proceeding further, we beg permission to quote, we find the following paragraph:—

“Although we recognise the syphilitic virus as the regular cause of tertiary symptoms, we must allow that it undergoes a modification in secondary symptoms, in consequence of which it is no longer inoculable. In tertiary symptoms this modification is still more striking. If it were not hazardous to form an hypothesis in order to explain facts, the proximate cause of which it is difficult to fix upon, it might be said, that in the *secondary symptom*, which is kept up by its presence, the virulent cause still exists; *that in the tertiary symptom it is completely transformed.*”

The important consideration of this last phrase we can not too strongly impress on our readers; it forms one of the best indications for the treatment which, whatever may be said on the subject of secondary symptoms, ought not and can not be specific here. Tertiary symptoms must be treated on general principles; the same means should be employed as if the diseases we are called upon to treat depended upon any other than a specific cause now completely transformed.

Our first care should be to remove all inflammation or irritation which can aggravate the local disorder; this point gained, we may next turn our attention to the constitution. The employment of tonics, nutritious diet, proper clothing, &c., will often have the best effects. Among other preparations, we have observed those containing the principles of *opium* to be followed by the best effects in allaying local and constitutional irritation. *Mercury*, in its various

forms, is, generally speaking, as prejudicial at this stage as it was beneficial in secondary symptoms ; and although in those symptoms of transition between the secondary and tertiary, as in deep tubercles of the skin, attended with callous ulcerations, it may still be advantageously employed, it is nevertheless true that the further we retire from the early stage of secondary symptoms, the less efficacious it becomes, until it ends in being highly prejudicial ; and when used even in the former cases, it should be combined with iodine in the form of proto-ioduret ; of the dose, quantity, &c., we shall not here speak.

If mercury then be, generally speaking, prejudicial, surgeons have the satisfaction of knowing that modern practitioners have the credit of discovering this, and rating the effect of the mineral at its just value, while their observations have enabled them to replace it by a preparation which daily experience in various parts of the world promises to establish as one of the most efficacious in the *Pharmacopœia*--we mean iodide of potassium.

Iodide of Potassium.—Those who have, like ourselves, witnessed the effects of this preparation given in all the stages of syphilis, will allow that its good effects seem pretty nearly confined to the cure of tertiary symptoms ; it has been much vaunted, but as we think injudiciously, in the other forms, although the cases in which it has produced relief are not sufficiently detailed, and in the successful cases the disease had arrived at what we term the tertiary form. We shall, however, in the following pages, state the results that may be expected from it, and the best means of producing them, the more especially as, when employed in the cases now under consideration, it is a treatment new to English practitioners.

We prefer giving M. Ricord's description : in speaking of the treatment of tertiary symptoms, he thus expresses himself :—

“ We may commence by a dose of ten grains taken daily in a mixture, for which I give the following formula :—

Distilled water, $\frac{3}{4}$ ij.

Iodide of Potassium, gr. x.

Syrup of Poppies, $\frac{3}{4}$ j.

This mixture should be taken in the course of the day, in three glasses of decoction of sarsaparilla, or some bitter infusion. The doses may then be augmented by ten grains every five days, until the dose of a hundred grains may be taken daily : this dose I have rarely exceeded.

In addition to the curative effects, the iodide of potassium may

have an action on different parts of the economy, which it may be well to mention.

The digestive organs usually bear it well ; but in some cases the patients complain of pain or an uncomfortable feel at the stomach ; this pain has some analogy with that met with in pleurodynia, but differs from it in being deeper seated. In certain cases the thirst is augmented, although usually the appetite alone becomes increased, and nutrition so much exaggerated that patients grow quite fat. I have seldom had occasion to observe diarrhoea or vomiting. The skin may become the seat of certain eruptions analogous to *acne*, or *echthyma*, with small pustules. The urinary system may be considerably affected, and the quantity of water voided may be considerable.

The circulation has not appeared to me particularly affected, at least in the majority of cases. In respect to the nervous system, some patients have experienced what is called *iodic* intoxication, characterized by a slight uncertainty in the voluntary movements, some subsultus tendinum, heaviness in the head, a species of intellectual idleness, and sometimes slight delirium. In all cases, even at the extreme dose to which I carried this remedy, all the symptoms have been very trivial. Their appearance, however, and especially any tendency to become aggravated, has always been an indication for me to stop the dose, whatever that may have been ; in the same way that each time a symptom got better, I have continued at that dose which produced the amelioration, not wishing to increase it until a stationary condition supervened. It seldom happens that the affection we are called upon to combat does not show marks of amelioration during the second week of the administration of the iodide, or sometimes later. The tubercles become absorbed, the ulcerations grow cleaner, suppuration diminishes, the pains in the bones cease ; and the osseous tumors, provided they have not reached the indurative state, which resembles ivory, speedily become dissipated.

Treatment of particular or individual forms of Tertiary Symptoms.—If the above treatment be beneficial in relieving and curing the diathesis, or state of constitution in which we have found the patient, we must nevertheless not neglect the local treatment ; for here, as elsewhere, although the local depends upon and is kept up by the general diathesis, it in its turn reacts on the general health, and maintains it in an unfavorable state for recovery.

Local Treatment of Tumors seated in the Subcutaneous Tissue.—It is unnecessary here again to remind the reader that any inflam-

matory symptoms should be combated by antiphlogistic measures adapted to the condition of the patient; when all such have ceased, the tumor, if at its commencement, or even when fluctuation is perceptible (provided the skin has not become discolored), should be covered with a blister, and the denuded skin may then be dressed with a solution of iodine; this acts as a local irritant, and is far preferable to the solution of corrosive sublimate, as it may produce beneficial effects both locally and generally. Usually, after the first blister, the tumor will be sensibly diminished; in such cases let a second or third be made use of, until complete resolution is effected. We have seen no cases resist this method when they have been treated sufficiently early, and when the constitution has been supported by the general means spoken of above, for we repeat this form of the affection principally occurs at a late stage, and in very unfavorable subjects. When, together with distinct fluctuation, there is discoloration of the skin over the tumor, it is useless to attempt this plan of resolution: the pus may be allowed to escape by puncture, and should the hard shell mentioned as surrounding the cyst be present, the cure will be often expedited by its excision. When called upon to treat those cases which assume, at a later period, a fistulous character, and are surrounded with an indurated margin, their local appearance may be benefited by covering the surface with the following application:—

Honey 12 parts.

Proto-ioduret of mercury . . 1 part.

The same effects will be obtained if the margin of the ulcer be touched with the solution of iodine, which is thus composed:—

Tincture of iodine, 3ii.

Distilled water, 3viii.

The latter preparation is particularly useful in cases where no induration exists; these chronic ulcerations will slowly cicatrize, and their edges rise to the level of the surrounding skin. This may be often hastened by applications of strips of plaster composed of *vigo cum mercurio*. An alternate treatment with *sedatives* and *stimulants* may, likewise, often be employed with advantage.

These observations equally apply to those cases of *submucous cellular tumors*, which admit of this treatment from their position, when placed beneath the mucous membrane of the *mouth* and *pharynx*. On the first symptoms of the appearance of suppuration, the cysts should be at once opened, and treated by emollient gargles; the parts may then be touched with the watery solution of iodine, or a gargle

may be employed, which, containing 3*i.* of iodine to eight ounces of water, and gradually augmented in strength, will speedily bring a healthy action of the affected parts ; but this local treatment alone will not suffice. The general one of the iodide of potassium combined with mercury, in proper proportions, when any induration exists around the edges of the ulcerations, must likewise be put in practice, and its success will surpass the most sanguine expectations.

Local Treatment of Affections of the Osseous System.—Pains in the Bones should be treated, at first, by repeated applications of a few leeches, followed by poultices ; or the parts may be covered with lint dipped in a warm decoction of poppies, or water and laudanum ; this treatment, together with a general one compatible with the state of the patient's constitution, will usually suffice, when the pain does not depend upon deep inflammation of the bones. However, there are forms of this affection which resist, and, although we are unable to detect either periostitis or ostitis, yet only cease on employing the treatment adapted to them.

The Treatment of Periostitis should consist, at first, in attempting to allay all irritation by leeches and poultices ; when the first and third varieties exist, such a practice will often suffice ; in other cases we must have recourse to a treatment which acts like a charm on the disease. Let a blister be applied on the painful portion of the bone ; when it has risen, the serum may be allowed to escape, but the epidermis need not be removed, as the pain will be less ; lint spread with the ceratum opii may be laid over it, and the whole covered with warm poultices, which should be constantly renewed. The severity of the disease, or its return, may require a repetition of the blisters, which should be treated on the same plan. When the tissues have not undergone much organic change, the relief felt is immediate and lasting ; we have frequently seen patients fall into a calm sleep even during the drawing of the blister, and this in the case of persons who have been kept awake by violent pain for weeks ; if swelling be present, it may be often removed by the employment of blue ointment, applications of tincture of iodine and water, as by the formula given above, or the suppuration may be kept up by means of the solution of corrosive sublimate. The pain attending this last substance will, however, generally preclude its employment. In the second variety of periostitis, this treatment is less efficacious ; it may be necessary in such cases to make incisions and let out the pus, as by such means we may prevent a further separation of the periosteum from the bone, an object always to be desired.

Local Treatment of Ostitis.—The treatment recommended in the two former affections, viz., pain in the bones and periostitis, is equally applicable and judicious in the early stages of ostitis, accompanied with a deposition of callus forming the *epigenic exostosis*; but it may be necessary to employ the treatment more actively, and for a longer time, particularly in the *parenchymatous exostosis*. When called upon to treat a patient for diseased bone which has been converted into a species of ivory, all treatment will be unavailing, and it will become a question whether or no we might be justified in removing, by a surgical operation, this form of exostose.

In cases of *caries* or *necrosis*, particularly of the bones of the face, no time should be lost; they must be removed as soon as that is possible. M. Ricord observes, that the surgeon should be fully aware that caries produces caries; that a bone, the organic matter of which has been destroyed by suppuration, or which is dead, can never be regenerated by any treatment, general or local; and that it should never be left to be eliminated by Nature's efforts, except in those cases where the surgeon is unable to reach it. Bone of this description is truly a foreign body, keeping up and maintaining the disease, which, by means of the suppuration it gives rise to, may gain still deeper parts, and thus occasion *death*. The means adopted to remove these portions of necrosed bones need not be mentioned here.

CHAPTER IV.

SYPHILIS IN CHILDREN.

THIS subject has been already treated of in various parts of this work, but it has been suggested to me that, in a "Complete Practical Treatise on Venereal Diseases," a chapter ought to be devoted to syphilis as it occurs in infancy. I therefore shall, in the following pages, speak of such peculiarities as may be met with in early life.

PRIMARY SYMPTOMS.—On the subject of *contagion* in children, I may mention that the same laws exist as in the adult, with this difference alone, that the tissues being very delicate, inoculation would be more liable to occur, provided children were as frequently exposed to the effects of the virus. This, however, is not the case; and I have met with no instances of *primary* symptoms, nor can I find in

authors any cases where distinct chancres have existed. In early life, however, ulcerations of the genitals are not unfrequently met with. I have lately seen in St. Bartholomew's Hospital two instances of children (both females) with some ten or twelve ulcers on the thighs and labia, attended with discharges from the vagina, and a considerable excoriation of the surrounding parts. Such appearances I could attribute alone to dirt and want of cleanliness on the part of the parents, together with pustular itch which had ulcerated; but as inoculation was not employed, it was impossible to speak more precisely of their nature. Cleanliness alone speedily produced a perfect cure.

In the children's hospital at Paris, I have not unfrequently met with ulcerations about the anus, mouth, and throat, depending upon a disease called *Muguet* or *Thrush*. A very able article on the subject has been lately written by my friend M. Roget, which may be seen in the French Medical Dictionary, in twenty-five volumes. Such appearances have been often attributed to syphilis, but, I believe, on insufficient grounds. Without, then, in any manner denying the occurrence of primary symptoms in children, I think they must be very rare. Should they occur, the treatment would be necessarily simple, and guided by the same indications spoken of in the chapter on Chancres in the Adult.

SECONDARY SYMPTOMS in children are, as far as my own experience goes, much less common than is generally supposed; such, however, is not the opinion of those who have written upon the subject; but when the difficulty which surrounds the whole question is considered, when the little attention that has been paid to the diseases of infants (until within the last few years) is considered, this supposed frequency of syphilis is not so surprising. The opportunities I have possessed of studying infantile disease in special hospitals, and of seeing the children of prostitutes, lead me to urge the correctness of my opinion. The result of my own observations I shall, therefore, now describe.

Infection of the fœtus in utero is stated to occur, and is now supported by so many facts, that it would be superfluous for me to insist upon it. Authors, however, are not agreed upon the manner in which this takes place. The physiological school would attribute it to sympathy; my own opinion is, that as the fœtus partakes of the existence, and lives on the mother, so does it participate in many of her diseases, although, as we are in ignorance of the exact connexion between the fœtal and maternal placenta, how this is affected must

still be unknown, and I could but amuse my readers with a more or less probable conjecture. We must, therefore, be content with the knowledge of the possibility of infection, in the present state of physiology.

Some modern authors believe that syphilis is communicated to the child by means of the milk of the nurse, the parents being perfectly free from disease, as well as the child previous to sucking a nurse who labors under secondary symptoms. This opinion, as far as I can collect from the cases which I have read, seems to require further corroboration ; without denying the possibility, I should believe it very improbable. I have never met with a case, and those recorded in books are liable to so many objections, that on this score I would give no opinion of my own.

It is a very prevalent opinion that the father who labors under secondary symptoms will beget offspring who show visible marks of constitutional syphilis, and such cases are scattered up and down medical writings and books on midwifery. This opinion, like the last, however, seems very problematical ; the chances of error are so great that I can hardly credit them ; and the fact, if true, is so contrary to direct experiments, that I am inclined to be skeptical. My incredulity is based on the following reasons : The father may have chancre in the urethra, and the semen, acting as the vehicle to the virus, will thus infect the mother, and secondarily the child. (See case in note to page 202.) The father or mother may have gone astray and contracted chancres, of the existence of which they are ignorant, or wish to conceal. The mother may have contracted chancres in other parts of the body, by the virus coming in contact with a sore or abraded surface. There are, in fact, a thousand chances of contagion, as modern investigations have proved, and which have been alluded to in various parts of this work.

Mr. Colles and Mr. Carmichael, if I mistake not, believe that secondary syphilis may be communicated to the child by the dry-nurse ; how this could occur I am unable to understand ; and I must believe that parties have conspired to deceive these eminent surgeons, who have such claims to public confidence, as correct observers and faithful delineators of symptoms.

In the commencement of my studies I was taught to believe that the death of the fœtus, and abortion about the seventh month, was due to constitutional syphilis in the female, and to its effects on the fœtus as characterized by a discoloration and peeling of the skin of the expelled embryo. Modern treatises on midwifery and diseases

of children still repeat these opinions, and support them with what is supposed to be corroborative evidence, namely, that if mercury be given, these abortions cease, and living children are born at the full period

When I was attached to the Venereal hospital in Paris, a great many pregnant prostitutes passed under my notice, who were laboring under secondary symptoms, but I did not remark that abortions were more frequent at the seventh month than at any other period. If the reader will refer to the valuable work of Parent Duchatelet, he will find that abortions frequently take place, but syphilis is not the cause: unnatural means, excesses of all kinds, abuse of the sexual organs, are there stated as the exciting causes, and the period at which it occurs varies from the fifth week to the ninth month, and no mention is made of the peeling off of the skin, or other marks of secondary symptoms. I am inclined, then, to believe that these statements, once started by eminent accoucheurs, have been admitted and believed on too slight grounds, and that they have not yet passed through the crucible of modern analysts of facts.

The children that I have seen laboring under secondary syphilis, have usually at birth presented no morbid appearance, although the mothers were severely affected with well-marked constitutional symptoms. Such children may have a healthy appearance, or be puny and weak; a few weeks pass over, and spots are seen about the anus or scrotum. A child was lately brought to Mr. Wormald, the assistant-surgeon at St. Bartholomew's hospital, with very distinct condylomata encircling the anus, which, the mother stated, appeared three weeks after birth. Frequently these spots resemble those seen in plate VIII., are raised, of a livid color, and have a very unpleasant odor. They may disappear, and a papular eruption cover the little patient, the stains having that coppery-colored hue which is so very characteristic, and lasting long after the papules have disappeared. The general healthy color of the skin is lost, the eye is dull, and the corners of the mouth and tongue present those white pearly patches so characteristic, and which have been alluded to elsewhere. Mr. Carmichael, in No. lxxvi., of the Dublin Medical Press, says, that the eruption in children is always found to be scaly; such an opinion does not accord with my investigations.

Prognosis.—As far as my own observations go, the prognosis is favorable, provided the mothers can and will take proper care of the children; in a few weeks the disease can be cured, and the child will rapidly gain its strength. I can not help here calling attention

to a statement of Mr. Tait, in his book lately published, entitled Magdalenism. According to his account, the mortality among children born of mothers laboring under secondary symptoms is dreadful. In the Lock hospital of Edinburgh, he states, out of twelve children seen during a period of three years, only one lived to the age of twelve months. Now I would appeal to any surgeon if this has ever been equalled in any other city in Europe. I answer no ; and I am almost afraid that professional readers must admit, either that the treatment in the Lock hospital does not keep pace with the progress of knowledge elsewhere, or that Mr. Tait has been led away in drawing a too unfavorable picture of the severity of syphilis, not only in this case, but in others where he has deigned to enlighten us with the few medical passages which can interest the surgeon.

TREATMENT.—Had I not dwelt, elsewhere, at considerable length on the treatment of secondary syphilis, I might devote several pages to it ; but, as far as my experience goes, I should say that the same indications must be followed in the treatment of infants as in adults, the doses being diminished, and the mildest preparations being employed. For this purpose we refer the *hydrargyrus cum cretâ*, in doses of two or three grains twice a day, and continued until the entire disappearance of the eruption. Other means have been recommended, but we have not found them so successful. It may here be mentioned that salivation is not liable to occur in the child, and that under the use of a mild preparation the recovery of the infant may be expected : it then rapidly gains flesh and recovers, but is liable to relapses, although, as Drs. Evanson and Murphy state, each will be slighter than the last.

The mother at the same time should undergo a course of mercury for the cure of her complaints ; and the child should not be allowed to take her breast, but may be fed on spoon food. Provided, however, it has no affection of the mouth, we can see no reason why it may not be suckled by a healthy nurse ; we have not seen any disease produced on the nipple of its wet-nurse, or the occurrence of secondary symptoms follow, although instances are stated to have occurred in previously healthy young women who have nursed syphilitic children.

We have, however, met with a few instances where a child with aphthæ on its mouth has produced sores on the nipples of its nurse, who affirmed that she had never had syphilis. We believe that such cases may be classed under two categories. In the one, the sores have no specific character ; they are the result of irritation and the contact of the diseased secretion of the child's mouth on an irritable

nipple. Such instances are not followed by secondary symptoms. The second category includes those cases where the nurse has suffered under syphilis, although she may have reasons for denying it, or motives for concealing it, wishing to attribute it to a sickly child she has taken in to nurse ; such cases are very frequently followed by secondary symptoms, and may give rise to the supposition that the child was the cause. An interesting example will be found at page 508 of M. Ricord's valuable treatise : notwithstanding all his endeavors, the sores on the nipples (stated by the female to have resulted from suckling a diseased child), tested by inoculation, failed to produce the characteristic pustule ; only slight irritation of the inoculated point followed, and passed away in a few days.

EXPLANATION OF THE PLATES.

PLATE I.

FIG. 1.—EXCORIATION.

THE subject of this drawing had suffered many months from a greenish purulent discharge. She was a married woman, and attributed it to a disease which her husband had contracted about the same period. The introduction of the instrument was not attended with much pain. The characters of the excoriated condition of the epithelium, and the color of the secretion, show the analogy which it bears to balanitis in the male.

FIG. 2.—GRANULAR CONDITION.

THIS granular appearance of the os uteri and vagina is a very marked instance of what is often to be met with in the hospitals of Paris and London; though generally in a less degree. The subject of it was a short stout female servant; she stated that a discharge from the vagina had appeared eight months previously, and had continued to increase. The introduction of the instrument was very painful. The secretion was purulent, of a green color, of the consistence of cream, and so abundant that it ran out of the speculum. The analogy between this disease, and the granular condition of the conjunctiva in chronic affections of that membrane, can not escape the notice of the surgeon.

PLATE II.

FIG. 1.—ULCERATIONS.

THIS view was taken from a female, the wife of a shoemaker at Tours; she came to Paris in consequence of a discharge which had existed twenty months. This patient attributed it to abortion which occurred about that period; her husband, she stated, had suffered from several successive venereal complaints. Inoculation was tried on several and separate occasions, by M. Vidal de Cassis and myself, but the inoculated point healed in twenty-four hours, and as we always failed in producing the characteristic pustule, we concluded that these ulcers were not specific.

FIG. 2.—CATARRH.

THIS affection occurred in a young girl, a Belgian by birth, seventeen years of age, who presented a lymphatic temperament. She had been placed as servant to wait upon an old lady in Paris, and entered the hospital for a discharge. She stated, that previous to her arrival in Paris she had used much exercise in the open air, but during the last few months had hardly ever left the house, and lived in a very crowded and damp situation. The condition of the os tincæ in young females is well shown, but the mucous membrane is paler than usual. The artist has very correctly represented the glairy white of egg like discharge proceeding out of the os uteri, in which we occasionally meet with globules of pus, a secretion very different from those witnessed in the other forms of blennorrhagia.

PLATE III.

FIG. 1.—BALANITIS.

THE character of balanitis may, with advantage, be studied in this plate. It was impossible to say if sexual intercourse or a want of cleanliness was the cause. The general erysipelatous redness of the glans is well seen, and the excoriated appearance so often to be met with in this affection.

FIG. 2.—VEGETATIONS.

THE subject of this complaint was a young man twenty-four years of age. States he never has had either gonorrhœa or chancres. The characters of the complaint are well seen; the clusters of the granules are very florid, each granule presenting a conical appearance, though collected into masses.

FIG. 3.—ECZEMA.

THE appearances as seen in this plate are very characteristic of the affection; namely, the exudation of a serous fluid forming little scales, and the crevices are distinctly seen running between these little lamellæ, resulting from the drying of the exuded fluid. The history of the case was obscure; the patient advanced in life.

FIG. 4.—HERPES PRÆPUTIALIS.

HERPES in its various stages is delineated in this plate; commencing as a vesicular disease, its vesicles may ulcerate, and assume all the physical characters of chancre. The five or six vesicles will be seen on distinct patches of inflamed skin, differing in this respect from all other vesicular eruptions.

PLATE IV.

FIG. 1.—INOCULATION—SIMPLE UNCOMPLICATED CHANCRE.

THE original drawing was taken at the Venereal hospital, Paris, from a patient forty years of age. Connexion had taken place six weeks previously. The patient had continued his usual occupation of a blacksmith until two days prior to entering the hospital. The characters of simple chancre are well seen, more or less circular in shape, with loss of substance ; the edges of the sore neither elevated nor indurated, only slightly œdematos, with a red areola. The bottom as well as the sides of the sore are covered with tenacious yellow lymph.

The letters *a*, *b*, *c*, *d*, *e*, *f*, *g*, point to the progress of the artificial chancre produced by inoculation on the thigh with the secretion of fig. 1 ; *a* represents the inoculated point six hours after the operation, the other letters at intervals of twenty-four hours. Letter *h* is the chancre on the thigh about the tenth day.

FIG. 2.—FOLLICULAR CHANCRES.

REPRESENTS a case similar to that of Mr. H., detailed at page 188. The drawing was taken two days after the appearance of the affection, and ten days after connexion. We observe the co-existence of gonorrhœa ; the pus is seen issuing from the urethra. The principal object, however, is the development of the virus in the follicles on the glans, resembling the appearance seen in figure, marked *a*, *b*.

PLATE V.

FIG. 1.—DIPHTHERITIC PHAGEDENIC CHANCRE.

THIS drawing was taken from a patient under the care of M. Ricord. A mason by trade; twenty-nine years of age. On entering the hospital this patient's constitution appeared broken down by the combined effect of dissolute habits and poverty. A thin ichorous discharge flows from under the prepuce, from which a piece of lint, soaked in opium, is seen projecting. A distinct chord was felt, extending upward, in the direction of the ganglionic bubo, which commenced as a pimple. It was impossible to collect dates from this person. On uncovering the glans it presented the appearance figured in fig. 1, the phagedena is seen extending rather in breadth than in depth; no induration accompanies it; but we observe some œdema around the ulceration. I should wish to call attention to the analogy of ulcerations in the same individual.

FIG. 2.—INDURATED PHAGEDENIC CHANCRE.

THIS patient, a tailor by trade, twenty-three years of age, of a beautiful transparent complexion, stated that six weeks previously he had contracted chancres; they healed under simple treatment, and the cicatrix became indurated, and then red; and lastly a sore began in the centre, which has since been extending; a similar sore existed on the other side of the glands. The molecular gangrene is very marked, and the transparent indurated circle around it, elevated and distinct from the surrounding skin, is well seen.

FIG. 3.—GANGRENOUS CHANCRE.

THIS affection occurred in a young man twenty years of age, a bargeman on the Seine; who drank freely. He stated that eighteen days previous to his admission, he had had connexion with a prostitute at Rouen; fourteen days after a black spot showed itself on the upper part of the prepuce, which had become swollen and red, and had increased to the extent seen in the drawing. The whole of the prepuce was destroyed in the succeeding thirty-six hours.

Fig. 4, shows the mouth of a person affected with mucous tubercles in different parts of the body and the white bleached mucous membrane is well shown.

PLATE VI.

SYPHILITIC AFFECTIONS OF THE MOUTH AND THROAT.

FIG. 1.—SECONDARY

THIS patient entered St. Bartholomew's hospital, in February last, under the care of Mr. Stanley. He stated that in the previous September he contracted chancres, which he cured with some aperient medicine. About Christmas he first perceived eruptions on the scalp, and his throat soon after became sore. I would direct attention to the analogy between the affections on the skin and the mucous membrane ; they are seen to pass insensibly one into the other. In fact, the white and bleached superficial excoriation of the throat answers to the syphilitic lepra seen on the body. The speculum oris allowed us to gain a good view of the back part of the throat.

FIG. 2.—TERTIARY.

THE subject of this complaint was a young girl who had led a very dissipated life. About fifteen months previous to the time the drawing was made, she had had primary symptoms, and had been in various hospitals, but I could not learn that she had ever taken mercury. The principal features of the disease are well seen. The absence of papilla on the tongue, where ulceration had previously existed, excavated ulcers covered with a pulpy secretion, and surrounded with a red areola, bespeak at once the tertiary symptoms ; this is made more evident by the occurrence of rupia, which was present on various parts of her body.

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PLATE VII.

(SEE FRONTISPICE.)

This plate (the frontispiece) represents different phases in the evolution of tubercles. In the middle of the cheek are maculæ; on the upper lip and the external and lower palpebral region, are several small and separate tubercles; on the left side of the nose are confluent tubercles, which are thicker at the back part of the ala, and there form a large tubercle. On the cheek also are two pustules of ecthyma with tubercular base and surrounded by a dark red areola. On the lower pustule the crust appears.

P L A T E V I I I.

This plate represents those abnormal vegetations which sometimes occur in syphilitic patients and are seen around the anus, and sometimes even on the penis.

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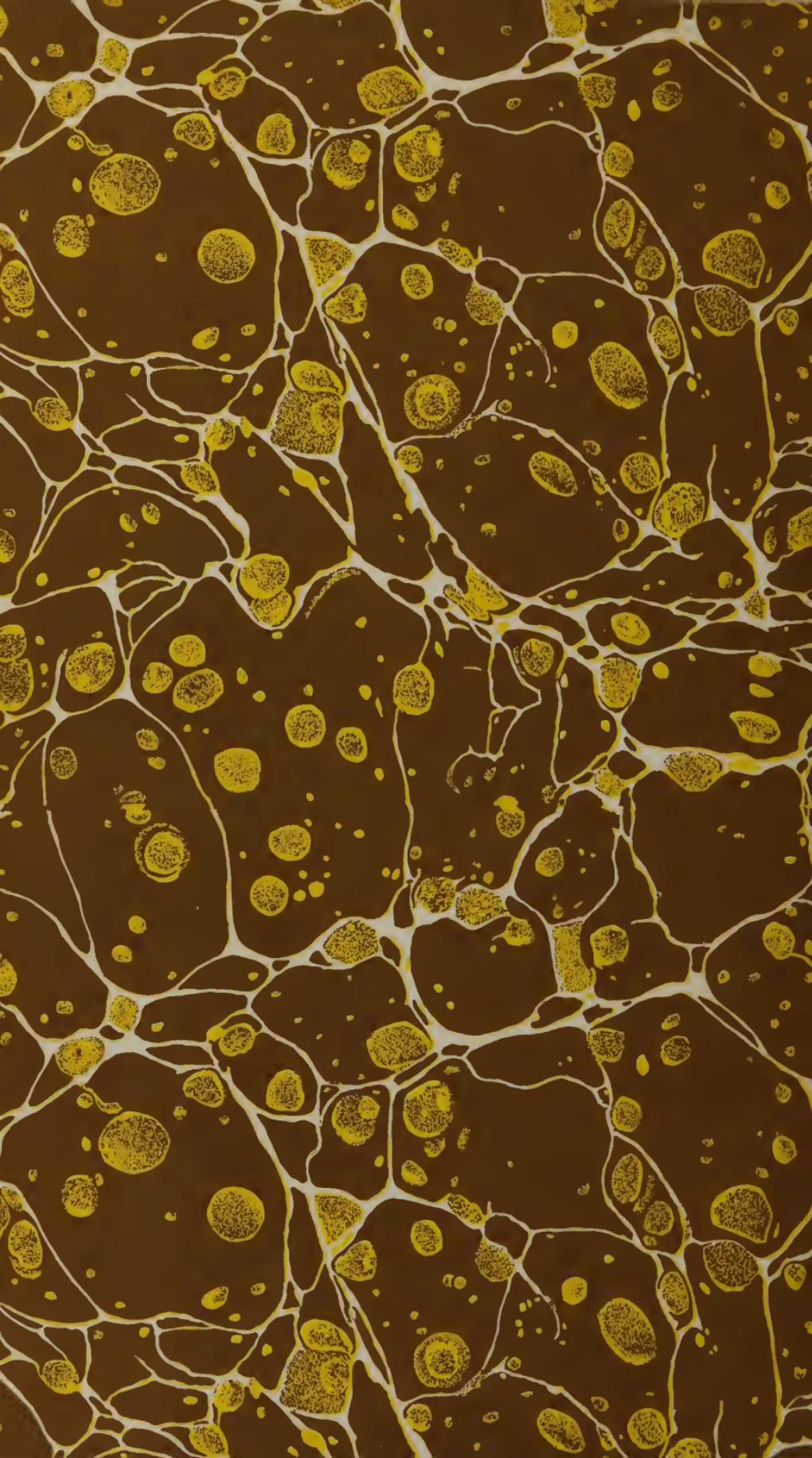
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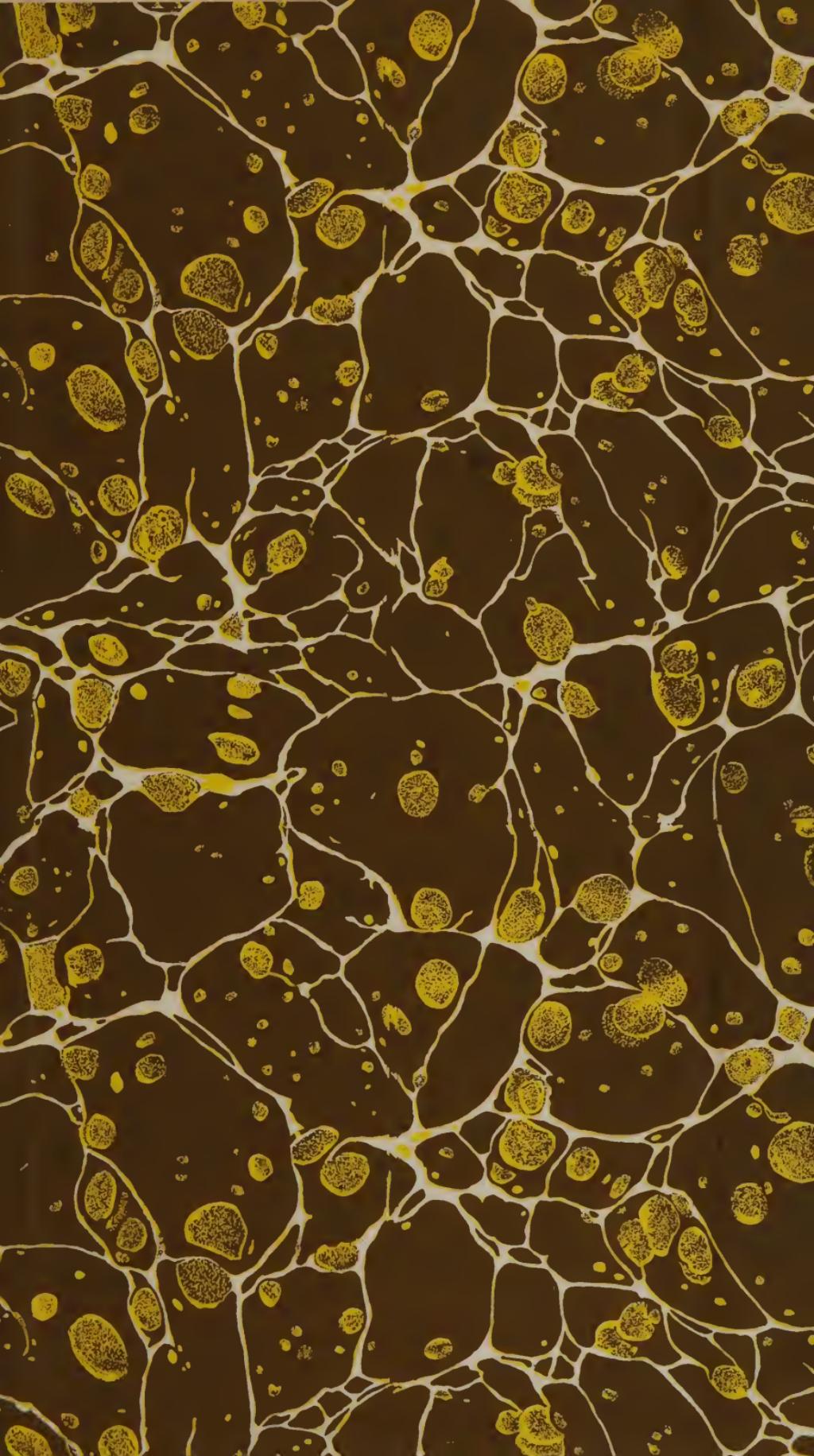
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